PLEASE ROUTE THIS COPY TO	
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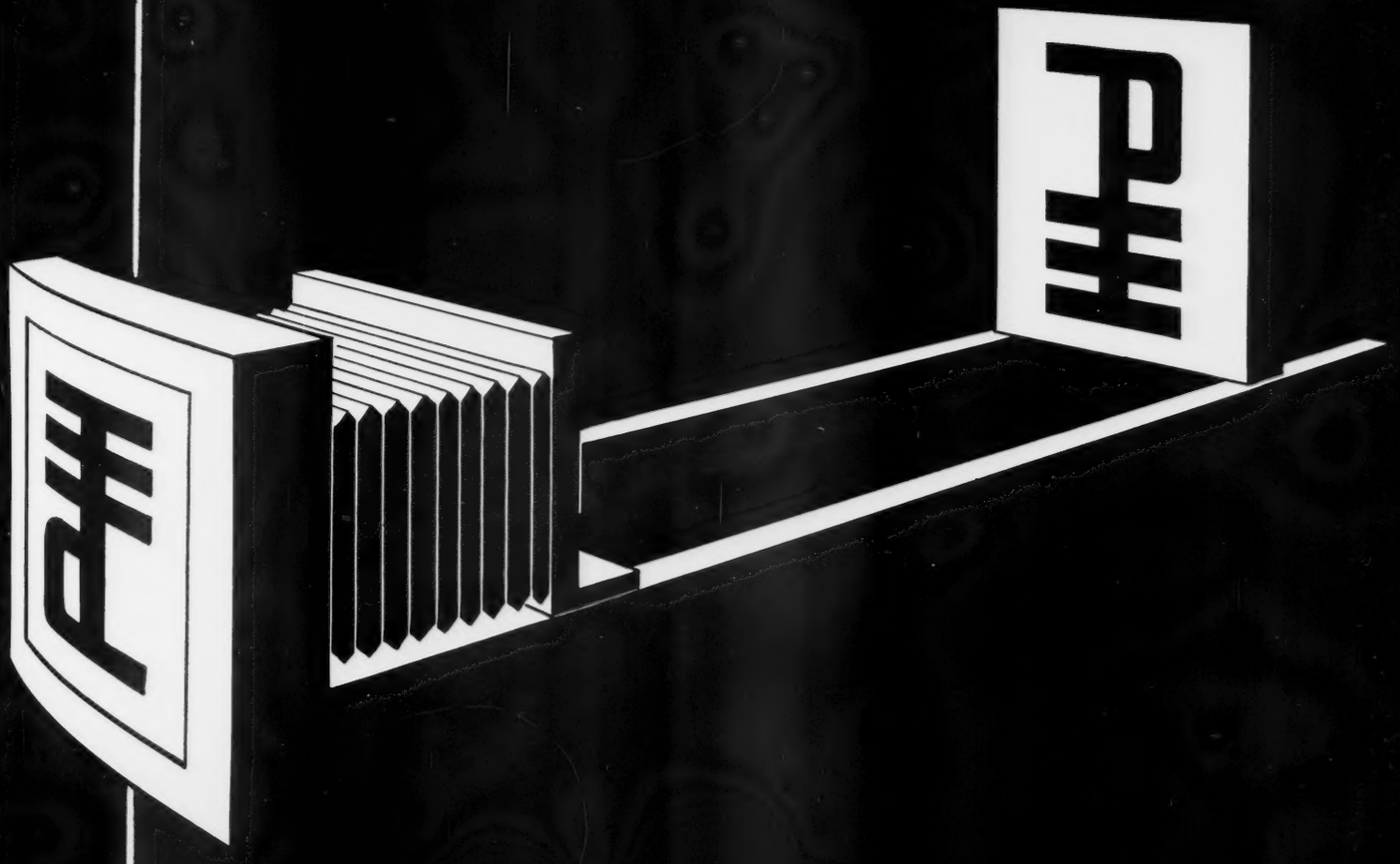
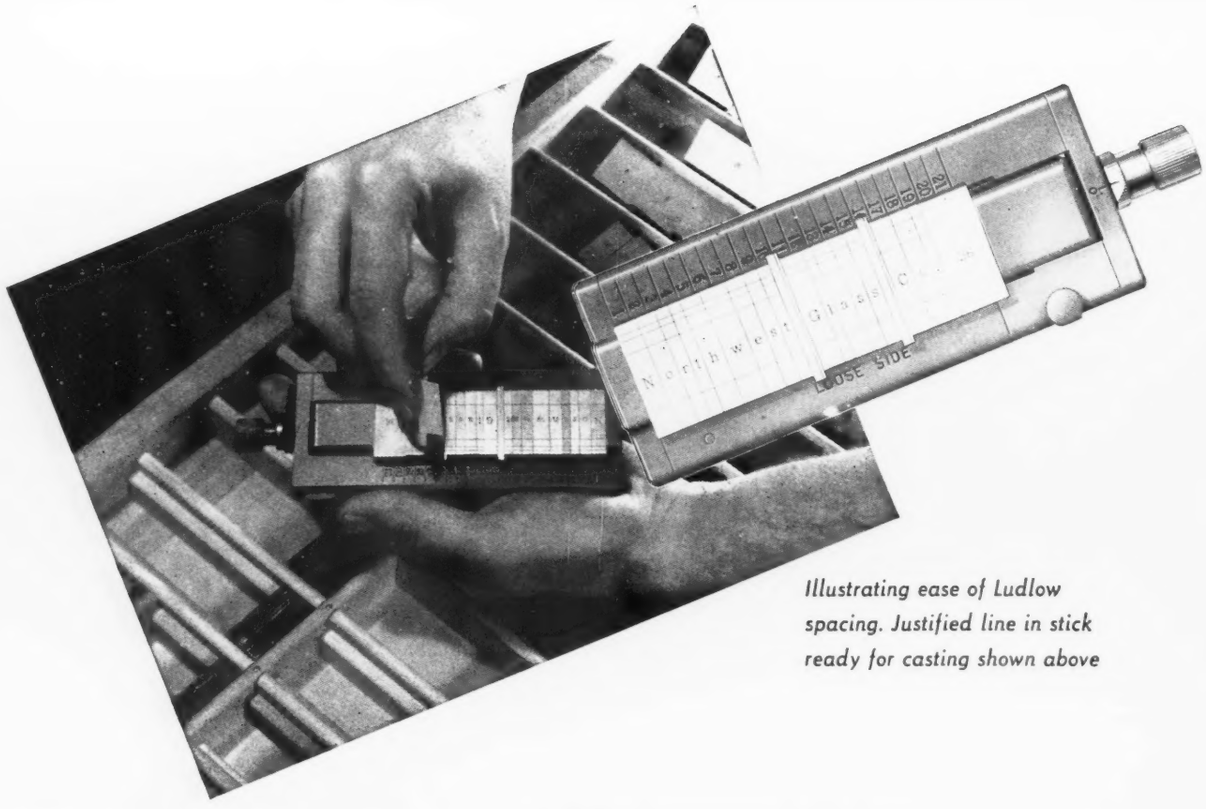
Production Mgr.	Bindery F'm'n
Plant Supt.	Mailing F'm'n
Platemaking F'm'n	Maintenance Supt.
Composing F'm'n	Purchasing Agt.
For filing, please return to	

PRINTING EQUIPMENT *Engineer*





Illustrating ease of Ludlow spacing. Justified line in stick ready for casting shown above

Ludlow Spacing

is easily and readily accomplished

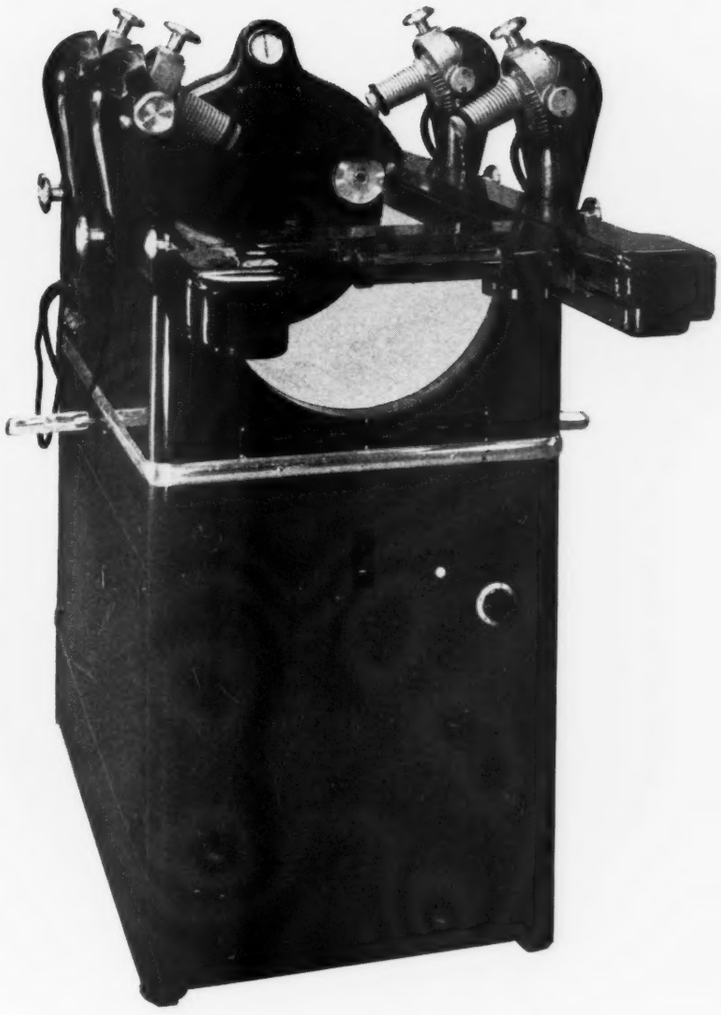
With the Ludlow, the printer obtains all the values of hand spacing that go to make a good job of composition. Ludlow spaces are the easiest units to get at and to handle, as the "ears" of the flat, ample-sized space matrices extend beyond those of letter matrices. The line is quickly and easily spaced out, and the compositor can readily determine visually if the spacing is correct between words and letters. Even thin spaces are quickly inserted or removed, and letterspacing is an easy operation. There is also no "spacing tight to lift," as a turn of the screw tightens the line for casting. Efficiency in spacing is one of the reasons why Ludlow composition goes up so readily, without lost motion.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Tempo family

SEE IT AT THE ANPA CONFERENCE

Sta-Hi Master Trimmer cuts color production costs!



STA-HI *Master Trimmer*

- Time is money—and you **save time** in the preparation of your r.o.p. color runs when you use a Master Trimmer.
- This precision machine, built to suit your particular requirements, speeds up and simplifies the entire process of color registering. It does the job in the stereotyped page mats — **before plates are cast.**
- Master Trimmers now in operation in progressive "color - minded" newspaper plants have eliminated much costly and tedious routine in the color registering operation — and made possible **speedy, high quality color printing.**
- See the Master Trimmer demonstrated at the STA-HI exhibit, Booths 74 and 75 at the ANPA Mechanical Conference in the Edgewater Beach Hotel, Chicago, on June 11, 12 and 13.
- At your request we'll be glad to send you an illustrated brochure describing the Master Trimmer in detail. Write today!

Sta-Hi Corporation

"SUPERIOR NEWSPAPER PRODUCTION MACHINERY"

235 W. WASHINGTON BOULEVARD ● BOX 152, WHITTIER, CALIFORNIA

HUNDREDS OF LEADING NEWSPAPERS PREFER IMPERIAL ZINC

- ★ Fast Etching
- ★ Clean Etching on First Bite
- ★ Etch Without Dirty Bottoms
- ★ Burn in Without Buckling
- ★ Smooth Finish
- ★ Uniform Hardness
- ★ Fine Uniform Grain
- ★ Uniform Gage
- ★ Easy Routing
- ★ Close Register on Color Work

BECAUSE the manufacture of Imperial Register-Redibak Zinc is controlled for quality every step of the way, users of Imperial Zinc meet deadlines without the delays of slow etching and makeovers. With Imperial your etcher is assured of fast, smooth etching and clean bottoms on line cuts as well as halftones of 75 screen. For close register color work, the elimination of objectionable stretch and the ability to take re-etching are outstanding characteristics.

Newspaper etchers therefore generally prefer Imperial Register-Redibak Zinc.

Imperial

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SERVING THE GRAPHIC ARTS *Exclusively*

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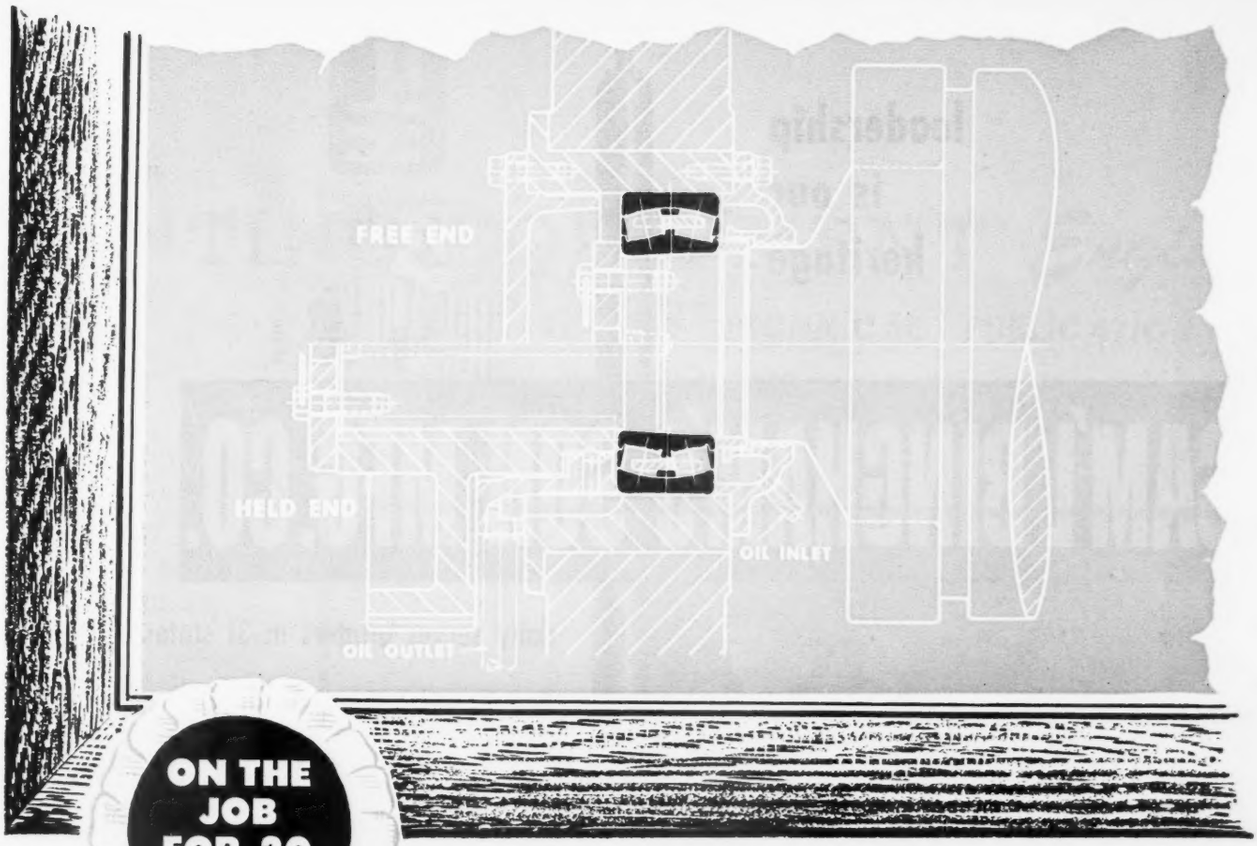

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SKF Self-Aligning Printing Cylinder Bearing ON ALL TYPES OF PRINTING PRESSES

The SKF Self-Aligning Printing Cylinder Bearing answers the printing press builder's specifications for a bearing with a "large bore and relatively small outside diameter."

Uniform preload built into each bearing at the factory. No adjustments are necessary if replacement bearings are ever required.

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NEWSPAPER PRESSES, black and color units
MAGAZINE PRESSES
METAL AND PAPER OFFSET PRESSES, both sheet and web fed
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An SKF Engineer is always at your service to help you secure the right bearing for your job. His advice is sound . . . you'll find it profitable.

SKF Industries, Inc., Philadelphia 32, Pa. 7078

SKF
BALL AND ROLLER BEARINGS

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

INTEGRITY — CRAFTSMANSHIP — METALLURGY — TOLERANCE CONTROL
SURFACE FINISH — PRODUCT UNIFORMITY — ENGINEERING SERVICE — FIELD SERVICE

Pioneers of the Deep Groove Ball Bearing—Spherical Roller Bearing—Self-Aligning Ball Bearing

leadership
is our
heritage

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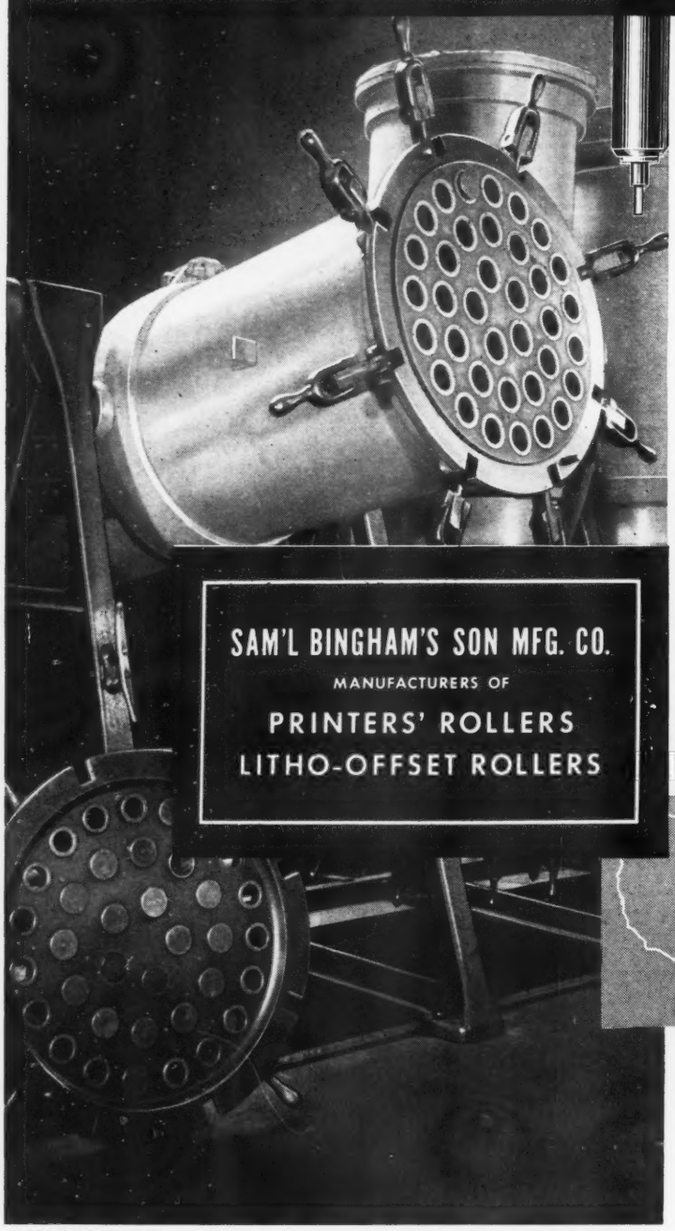

daily serves printers in 31 states

With 19 modern factories making rollers for use today on today's presses . . .

And over 5 generations of top-flight service to the printing industry . . .

Our reward is the faith of thousands of American printers who swear by Sam'l Bingham's Son Mfg. Co. rollers and our ability to deliver "The Right Roller—Right Away!"

IT'S NOW TIME TO GET YOUR COMPOSITION ROLLERS READY FOR

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SHIP YOUR OLD ROLLERS TO THE FACTORY MOST CONVENIENT TO YOU

Let us serve you too! There's a factory near you.

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MAKERS OF RUBBER • NON-MELTABLE • FABRIC-COVERED • ROTOGRAVURE • OFFSET • COMPOSITION • VARNISH-LACQUER • GRAINING **ROLLERS**

PRINTING EQUIPMENT *Engineer*

AN INDUSTRY-WIDE TECHNICAL PUBLICATION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

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LEADING ARTICLES

June 1951

ANPA Mechanical Conference Program 49

ANPA Mechanical Committee and Research Executives 51

R&EC Executive Committee 54

RollAskid Paper Turner 55

TAGA Replaces TALI 56

Offset Blanket Thickness Gauge 57
ROBERT F. REED and WALTER J. BUBLITZ

Story About Matrix Contrast Corp. and Its New Plant 58

Air Cleaning Problem in Pressroom Ventilation 60
S. H. FAIN

Flying Offset Printing Press for the U. S. Armed Forces 62

NPA Printing and Publishing Div . . . 64

NALC Convention 65

Maintenance of Printing Equipment . 66
C. O. SIEBKE

The ABC of Offset — XVI 68
GEORGE JOS. LENZER

Automatic Processing Equipment at Huber's New McCook (Ill.) Plant . . 72

Equipment and Supplies 74
- Matrix Alignment Restored with Align-A-Mat, 55
- Fire Extinguisher Guide, 56
- Automatic Stereotype Metal Pump, 74
- Pearce Automatic Collator, 74
- Miller Pocket Catalog, 74
- Unitaire Conditioner Booklet, 74
- Portable Stroboscope, 75
- New Monotype Lanston Molds, 75
- Back-Up Board, 75
- Concentrated Wonder Spray, 75
- Redesigned Printing Press Controls, 75
- Web Press Infra-Red Drying Oven, 76
- Heat Blower for Printing Presses, 76
- Automatic Stream Feeder, 76
- Speed Reducers, 76
- Air Conditioning Booklet, 76
- Machine Leveling Jack, 77
- Slitter and Rewinder, 77
- Key-Rite Bulletin, 77
- Paper Roll Trucks, 77
- pH Control, 77
- Magazine Enveloping Machine, 77
- Embossing Press, 77
- Silk Screen Ampul Printer, 78
- Xerography Camera, 78
- Bulb Marking Changed, 78
- Bearing Manual, 78
- Shrinkmaster Pre-shrinker, 79
- Hamilton Catalog, 79
- Industrial Lighting Booklet, 79
- Twin Vacuum Frame Cabinet, 79
- Magnifier Spotlight, 79

Modernization Program is Continued . 80

Mechanical Department Techniques Discussed at Iowa Conference 82
PAUL F. KAMLER

Materials Handling System 84
RALPH THORNTON

Conference Dates Box 86

Patents For the Graphic Arts 87

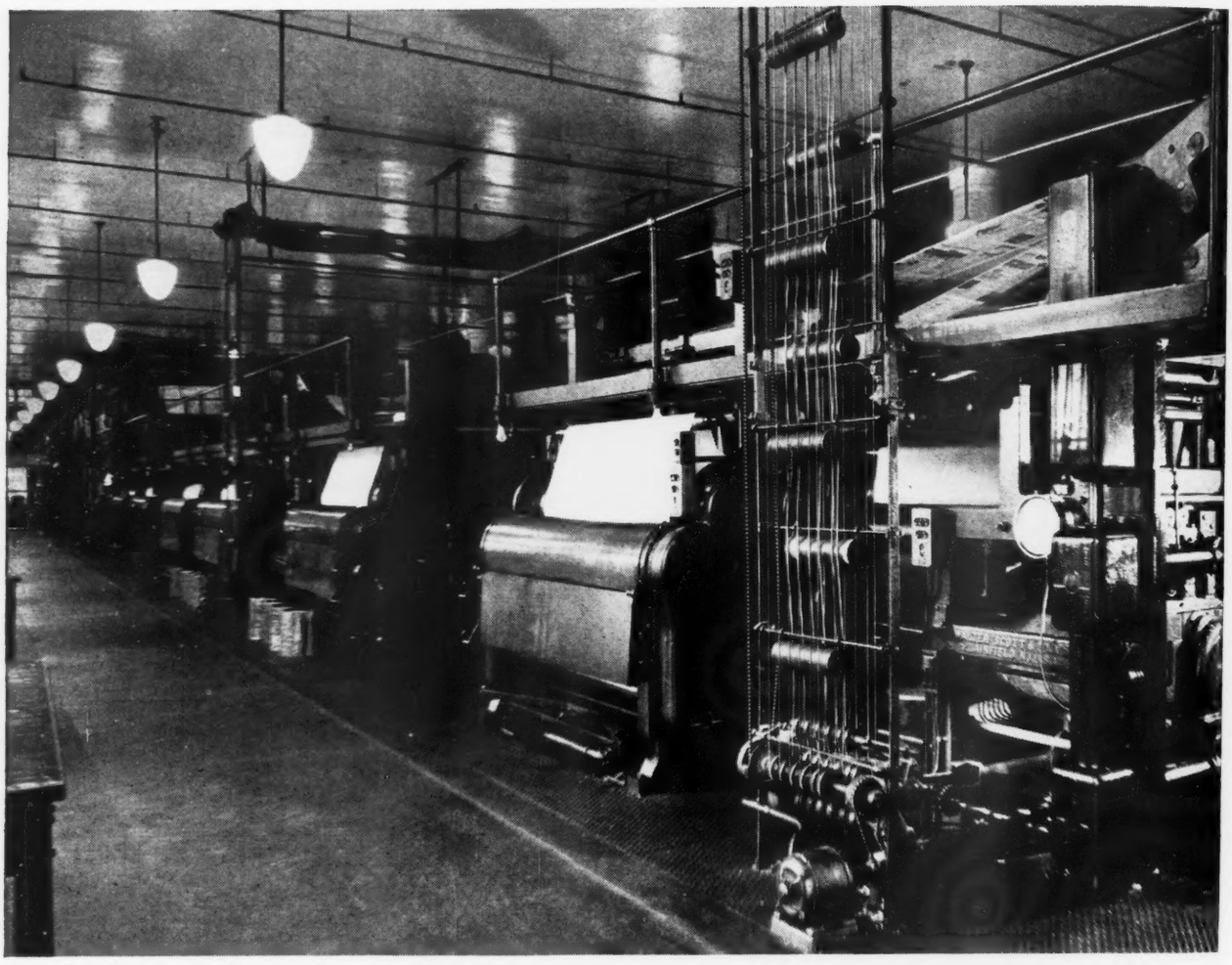
Recent Equipment Reports 96

Executive Paragraphs 100

What's A Colloid? 103
LTF RESEARCH STAFF

Spot Carbon Printing 106
M. S. KANTROWITZ

Books 109
- Shop Manual Typographic Numbering Machines, 109



BUILT LIKE A BATTLESHIP...RUNS SMOOTH AS A WATCH

Like Battleships, SCOTT PRESSES are built to withstand the most rugged runs.

Symmetry of design—Precision machining—Dynamically balanced rotating parts—provide consistently smooth, trouble-free, economical operation.

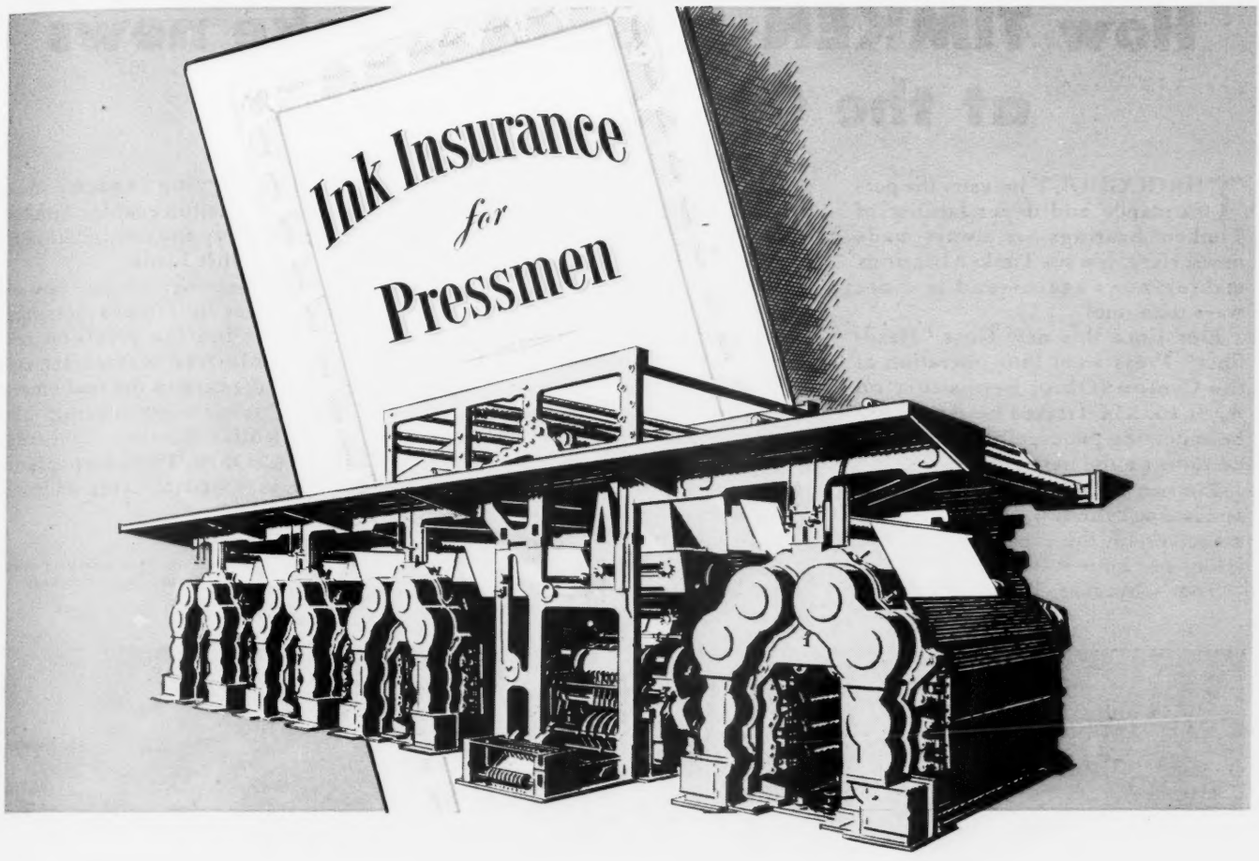
Thoroughly modern, SCOTT "EXTRA HI SPEED" PRESSES, of Alloy Steel construction, are the ultimate in engineering—substantial as Battleships, yet run with the precision of the World's Finest Watch.

Modernizing . . . Expanding . . . Planning a New Plant . . . Consult SCOTT on the fastest, most versatile newspaper press equipment ever developed.

Buy with confidence . . . Buy SCOTT

15-L-11

WALTER SCOTT & CO. INC.
PLAINFIELD, NEW JERSEY



BACK OF every pound of MORRILL ink are those valued ingredients — quality and experience gained from years of research and manufacture. This means *ink insurance for pressmen* because they can count on MORRILL newspaper inks to be uniform in consistency and press performance.

Every MORRILL representative is a trained ink man at the service of pressmen in publishing plants throughout the country.

MORRILL'S METERED INK DELIVERY

assures a constant supply of web press and comic colors, as well as newspaper black inks. A fleet of high-powered trucks serve as connecting links between our distribution centers and your plants.

●

Specify MORRILL newspaper inks and you'll have the best inks right on time to protect your production schedule.

GEO. H. MORRILL CO.

DIVISION OF SUN CHEMICAL CORPORATION

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NORWOOD, MASS. • CHICAGO • PHILADELPHIA • DETROIT • ST. LOUIS • FORT WORTH

MINNEAPOLIS • SAN FRANCISCO • SEATTLE • LOS ANGELES • TORONTO

WORLD'S LARGEST MANUFACTURER OF NEWSPAPER INKS

How TIMKEN® bearings make news at the Canton Repository

THROUGHOUT industry the performance and dependability of Timken® bearings has always made news. Here, you see Timken bearings making news again—and in more ways than one!

Ever since this new Goss "Headliner" Press went into operation at the Canton (Ohio) Repository on April 16, 254 Timken bearings have been helping put evening and Sunday editions on the newstands.

Timken bearings on the printing and inking cylinders, and in the drives make certain the capacity of 45,000 issues per hour roll off the press.

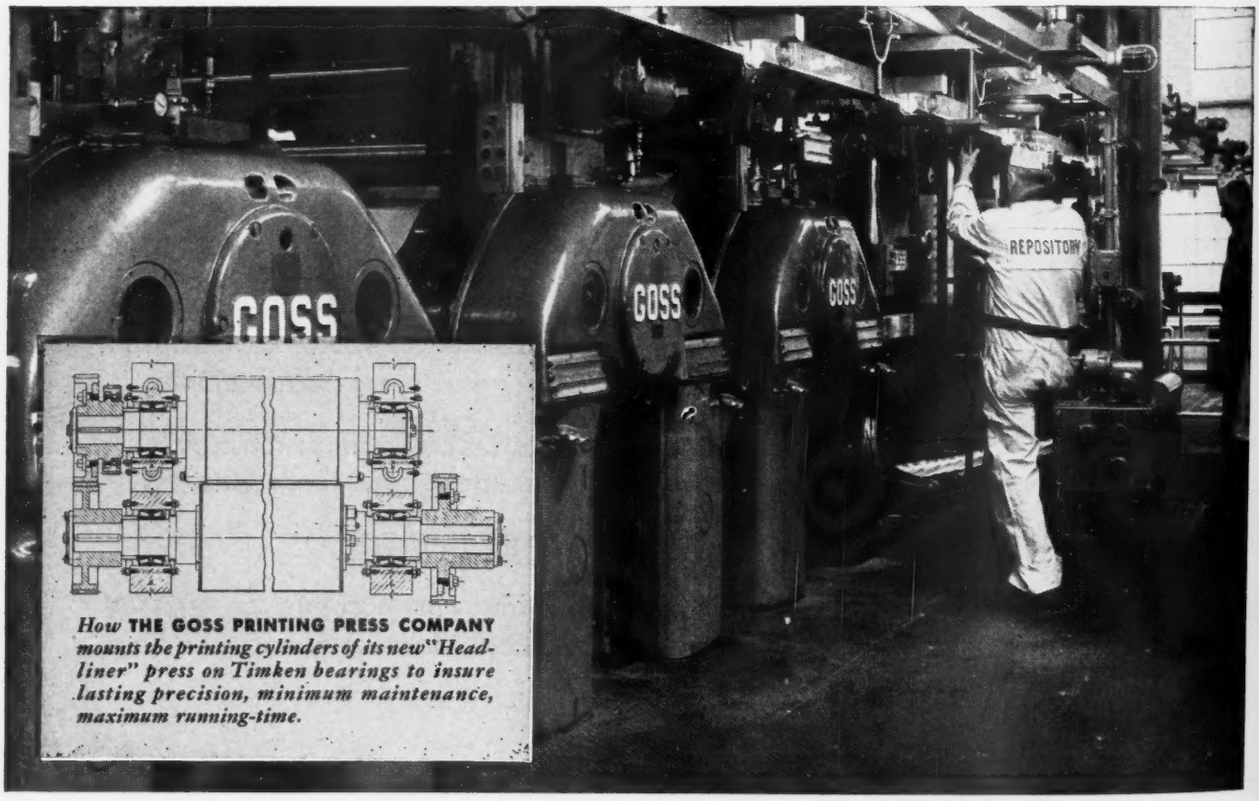
That's because Timken bearings prevent costly and time-consuming delays for maintenance and lubrication. What's more, they insure lasting printing precision and give long, trouble-free service for the life of the press.

And Timken bearings eliminate all speed restrictions due to bearings. Cylinders are kept in positive alignment, minimizing end-movement and deflection, and insuring consistently accurate impressions. Cylinder changes are made easily and quickly.

The true rolling motion and smooth surface finish of Timken bearings practically eliminate friction. Line contact between rollers and races give extra load-carrying capacity. And tapered construction enables Timken bearings to carry any combination of radial and thrust loads.

No other bearing can give you *all* the advantages of Timken bearings. So wherever bearing precision and long, trouble-free service are important, make certain the trade-mark "Timken" is on every bearing. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.



How **THE GOSS PRINTING PRESS COMPANY** *mounts the printing cylinders of its new "Headliner" press on Timken bearings to insure lasting precision, minimum maintenance, maximum running-time.*

FINISHED TO CLOSER TOLERANCES

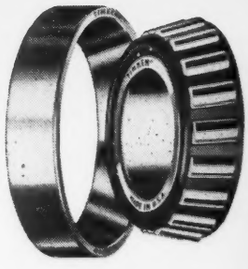
Finishing to incredible smoothness accounts for much of the precise, smooth rolling performance of Timken bearings. This honing operation is typical of the amazingly accurate manufacturing methods at the Timken Company.

The Timken Company is the acknowledged leader in: 1. advanced design; 2. precision manufacturing; 3. rigid quality control; 4. special analysis steels.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS



NOT JUST A BALL **NOT JUST A ROLLER** **THE TIMKEN TAPERED ROLLER** **BEARING TAKES RADIAL** **AND THRUST** **LOADS OR ANY COMBINATION**

experience

For almost a hundred years, Cottrell press-building experience has contributed immeasurably toward bringing the perfection of letterpress printing within the reach of more printers and their customers.

Cottrell's long understanding of printers' problems has resulted in the development of two- and five-color high-speed rotary presses which are capable of most economical operation in today's competitive market.

Such economies come from the use of accurately curved plates that fit the cylinder perfectly; spirally grooved cylinders with rapid register hook system for quick plating and lockup, as well as the efficient convenience and accessibility which cut down starting time and maintain continuous operation.

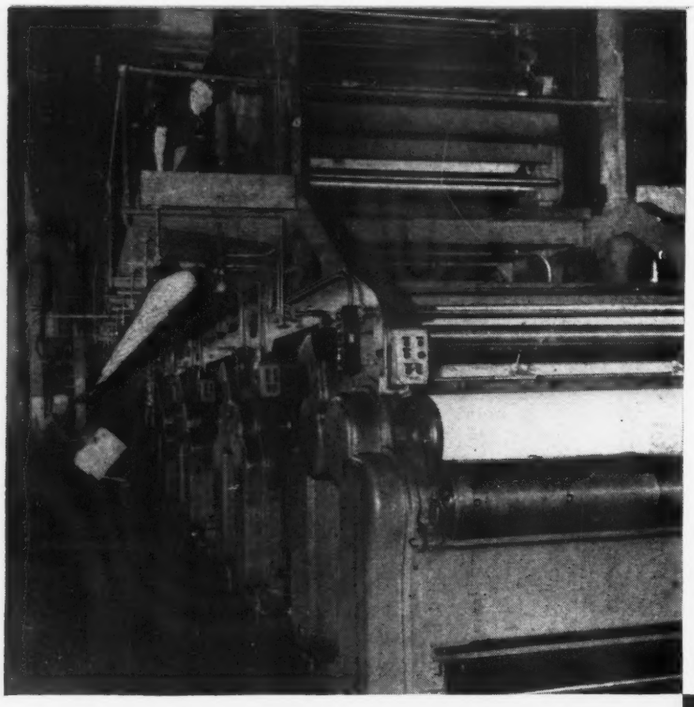
Write for full particulars. Let us show you the profit-building possibilities of Cottrell presses for your business.

C. B. COTTRELL & SONS CO.

Westerly, Rhode Island
Claybourn Division, Milwaukee, Wisconsin
Sales Offices: New York, Chicago, London

Photograph shows group of five-color presses going through our Milwaukee plant.

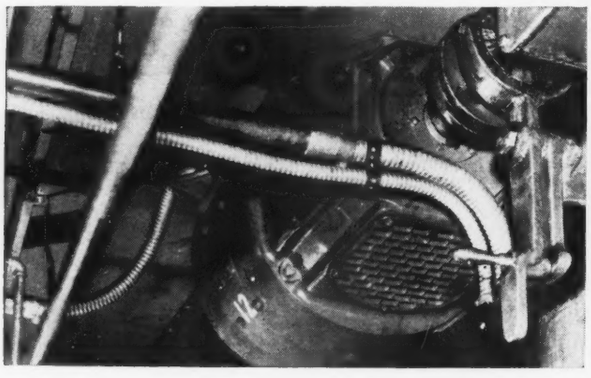
MODERN ELECTRIFICATION boosts pressroom efficiency



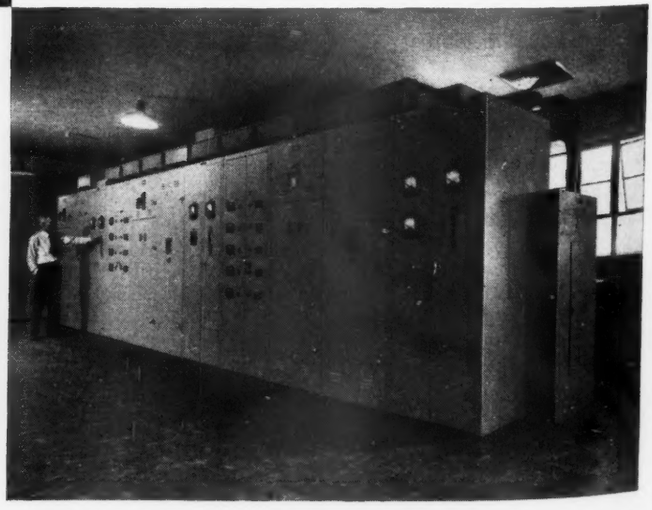
G-E ELECTRONIC PRESS DRIVE FOR ROTARY PRESSES INCREASES OPERATING FLEXIBILITY, GIVES YOU:

- **Minimum speed variation under load**
- **Reduced power loss**
- **First real stepless speed adjustment**
- **Simplified drive installation**
- **Easy, economical maintenance**
- **Simplified control installation**
- **Finger tip control operation**

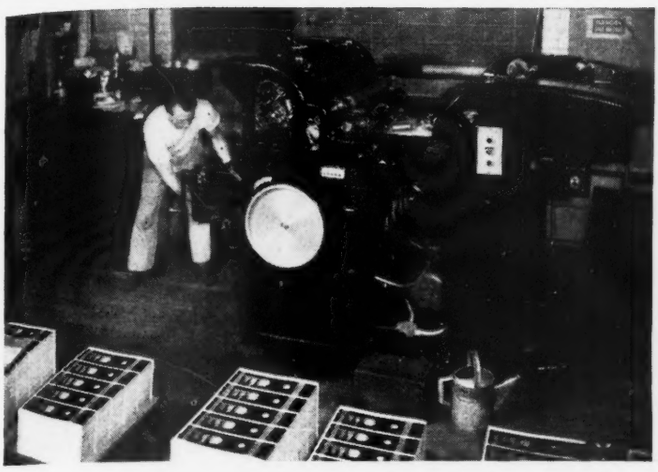
Installed in an Eastern newspaper plant this press is driven by General Electric d-c motors coaxially mounted with one motor on each unit to accommodate any possible mechanical combination of presses and simplify drive selection for these combinations.



One of the G-E electronic press drive motors. No need for slow motion motors, overrunning clutches, or drive brakes. One motor on each unit does it all . . . threading, jogging, running, and braking.



Control room in a west coast plant showing neat, compact, metal-clad controls which come factory-wired and need only be set up and interconnected. The need for extra ventilating equipment and servicing is also greatly reduced.



In this large Eastern printing plant, where a small offset press is driven by a G-E ACA adjustable-speed motor (center) one of the many advantages the operator likes is elimination of controller heat which formerly caused ink to pile up on one side of the press.

Here's the complete package

Now the time-tested adjustable speed ACA motor with built-in preset speed adjustment is combined with pilot motor and control unit. Can be furnished with motor mounted adjustable brake as shown.

G-E ADJUSTABLE-SPEED ACA DRIVE GIVES WIDE SPEED RANGE AND CLOSE SPEED CONTROL

This outstanding new drive for commercial printing is specially designed without resistors to give you:

D-C performance directly from A-C power

Space saving through press mounting

Wider printing speed range

Optimum press speeds through finer speed adjustment

Maximum output of delivered sheets for all jobs

Ease of installation, operation, maintenance

Low over-all cost

GENERAL ELECTRIC OFFERS YOU:

1. A complete line of electric equipment to meet your needs:
Electronic press drive for large rotary presses
AC drives for medium and small rotary presses
ACA adjustable speed drive for commercial printing
Web severing devices
Web break detectors
Push button stations
Web register control equipment
Stereotype heating and control equipment
Plant use equipment, transformers, switchgear, unit substations, cable, and many others.

2. Skilled engineering service to assist you on application problems and installation.

3. Co-ordinated selection, manufacture, and shipment of components to meet your construction and modernization schedules.

4. Quick service from the nearest of 31 service shops, for any emergency any time, to keep your plant and equipment operating.

INVESTIGATE TODAY!

For more information on any of General Electric's equipment for the printing industry and assistance in solving your electrical problems contact your nearest G-E apparatus sales office or write today. Apparatus Dept., General Electric Co., Schenectady 5, N. Y.

GENERAL ELECTRIC

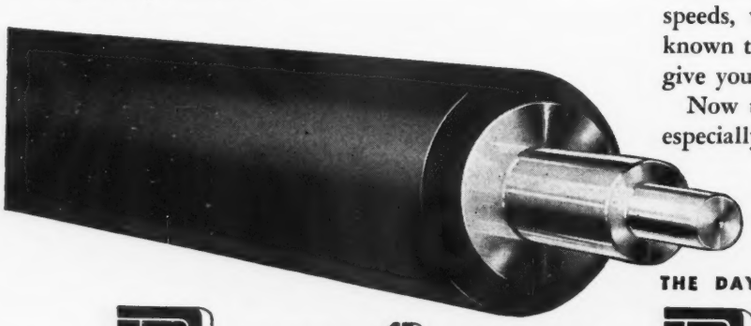
653-13

with non-stop, push-button printing

Faster, faster is the tempo of the presses in these days of big news. Can your rollers keep up without melting? Ever have to stop the presses to change rollers between editions, or between seasons? Then get the new Dayco Newspaper Rollers and neither tempo nor temperature will make any difference!

Daycos are the world-famous Roller that made push-button printing come true — just push the starter button and forget about rollers. Daycos handle black and white or color, in any position. They are practically unaffected by special inks, washup solutions, oils, acids, moisture. Diameter, shape and softness are unaffected by press speeds, weather, climate or season. Daycos have been known to outlast other rollers 3 and 4 times! And they give you daily color—deep, true, fast as the news.

Now that material shortages are with us again, it is especially important to equip your presses with Daycos —the rollers that will see you through. Remember—nothing rolls like a Dayco—for years and years!



THE DAYTON RUBBER COMPANY, DAYTON 1, OHIO

Dayton Rubber

PIONEERS OF IMPROVEMENTS FOR BETTER PRINTING

The Thinking Behind Smith's Color Ad Tests
By Robert B. McIntyre
Clothing Firms Urged To Use ROP Color
By George A. Brandenburg
The call for Color

'Milwaukee Journal' Leads U. S. Dailies in Color Ad Linage

CHICAGO, Feb. 23—The *Milwaukee Journal* last year again led the list of U. S. dailies in total r. o. p. color advertising carried. The *Journal* carried 682,120 lines of color copy in its evening editions and 400,420 lines in the Sunday edition, for a total of 1,082,540 lines in the entire year.

In second place was the *New Orleans Times-Picayune* and *States*. According to the Media Records report on r. o. p. color, the morning *Times-Picayune* carried 694,353 lines of color advertising and the Sunday *Times-Picayune - States*, 150,080 lines, or a total of 844,433 lines.

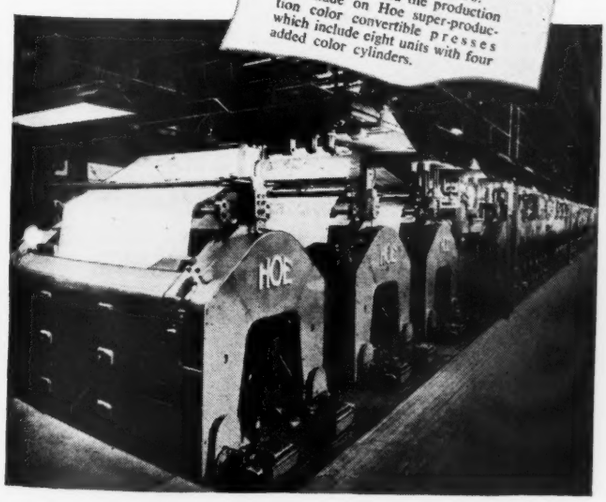
Color Printed on 5 Consecutive Pages in Tulsa

TULSA, Okla.—The *Tulsa World* carried five consecutive pages in color in Feb. 4 editions.

O. M. Harper, mechanical superintendent of Newspaper Publications Corp., publishing agent of the *World* and *Tulsa Tribune*, who has been in the printing departments of the two newspapers nearly 40 years, claimed "the largest consecutive color run in a U. S. newspaper." He did not include the regular comic section.

Mr. Harper reported that 583,314 agate lines of color ads were run in the local plant in 1950.

Mr. Harper said the production was made on Hoe super-production color convertible presses which include eight units with four added color cylinders.



A steadily mounting number of national advertisers are asking for the same color advantages in local newspaper advertisements that they secure in their magazine advertising.

This is especially desirable where it is important to illustrate the product in color, and the companies mentioned in the accompanying clippings are typical of the many national advertisers who are actively promoting the use of R.O.P. color in newspaper advertising.

To meet the call for a continually increasing volume of R.O.P. color advertisements, more and more farsighted publishers are availing themselves of the facilities of the HOE COLOR-CONVERTIBLE NEWSPAPER PRESS, of which over four hundred units have already been installed by leading American newspapers.

Hoe can also furnish color-printing facilities for existing press equipment.

R. HOE & CO., INC.

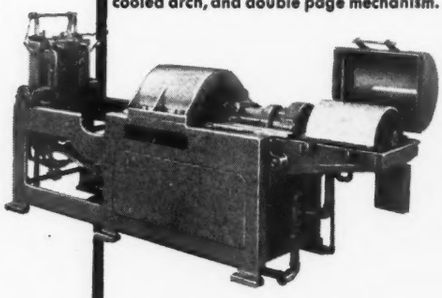
910 East 138th Street New York 54, N. Y.

BRANCHES: BOSTON • CHICAGO • SAN FRANCISCO

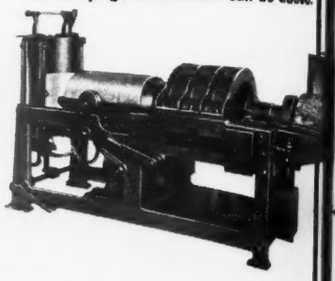
BIRMINGHAM • PORTLAND, ORE.

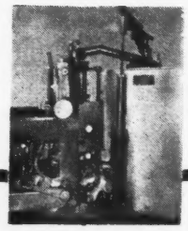
WOOD EQUIPMENT...

HEAVY DUTY PONY AUTOPLATE
Casts, shaves and cools stereotype plates. Includes vacuum casting system, water cooled arch, and double page mechanism.

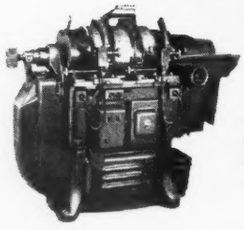


STANDARD PONY AUTOPLATE
Casts, shaves and cools stereotype plates. Vacuum System, Water Cooled Arch and Double page Mechanism can be added.





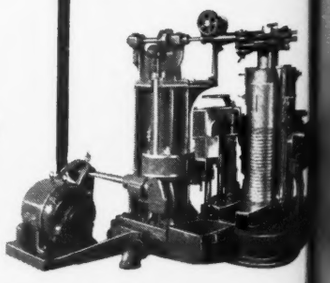
PONY PNEUMATIC PUMPING DEVICE
Automatic pumping to Casting Box with triple safety features.



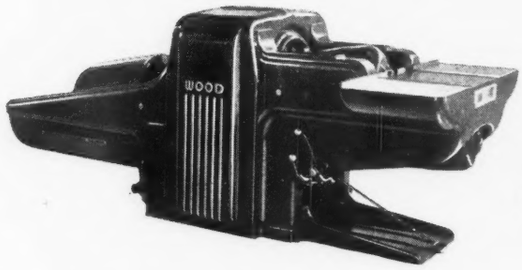
AUTOMILLER Mills pockets for tension plate lock up. Used in conjunction with Pony Autoplate. Registers color plates cast in Pony, Junior or Automatic.

JUNIOR PNEUMATIC PUMPING DEVICE
Automatic pumping to Casting Box with triple safety features.

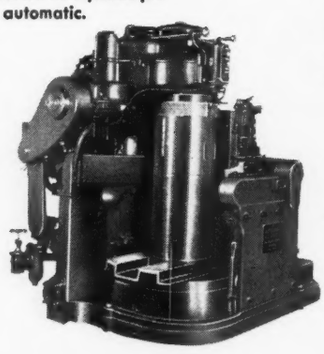
JUNIOR AUTOPLATE Rapid, semi-automatic plate caster.



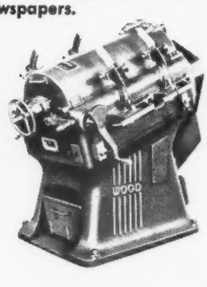
HEAVY-DUTY AUTOSHAVER Rapid, accurate plate shaving. Available with Tension Plate attachment for milling pockets to accommodate tension plate fingers.



AUTOMATIC AUTOPLATE
Casts and delivers four plates per minute, fully automatic.



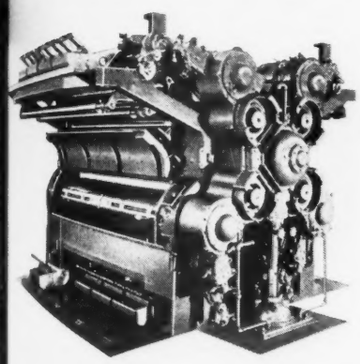
COLOR PLATE PRE-REGISTERING MACHINE
Fast, accurate color plate registering for large editions of color newspapers.



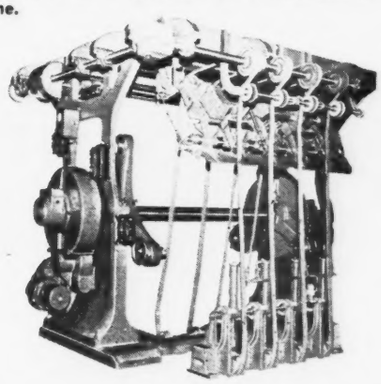
AUTOLIFT Automatically feeds stereotype plates to the furnace

...the heart of America's busiest newspapers!

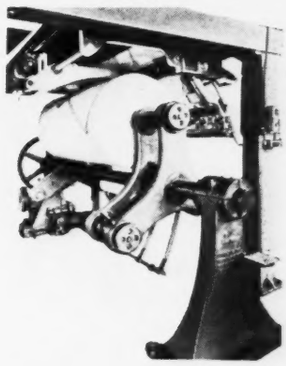
COLOR UNIT High speed rotary press with provisions for color. Designed to print newspapers of larger circulation.

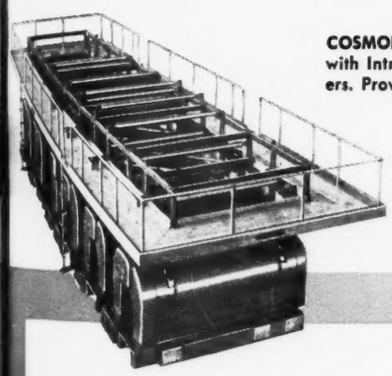


REELS, TENSIONS, AUTOPASTERS
Precision reels, automatic web tension control and automatic web splicing equipment. Reels, Tensions, Autopasters also available in a self-contained frame.



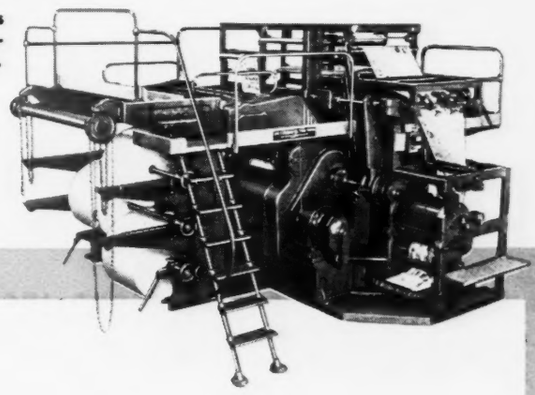
ELECTRO-TAB AUTOPASTER
Dependable web splicing equipment that can be installed on any make reel.





COSMOPOLITAN PRESS High speed rotary press with Intrasertor for printing smaller-city newspapers. Provides for use of color in regular editions.

NEWSPAPER PRESSES For printing large editions in black and white.



This is the equipment that has brought to many of the finest newspapers in the land —large, medium and small, the three ingredients of success: The means to produce well-printed papers rapidly . . . dependably . . . economically.

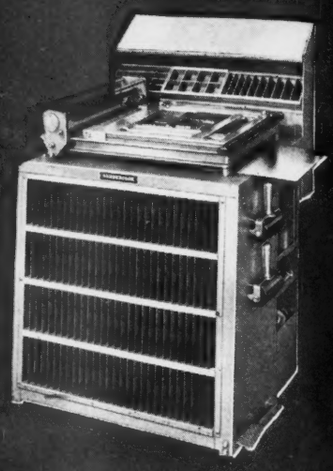
If pressroom or stereotype production presents problems in your plant . . . the proper WOOD equipment is your answer.

WRITE THE WOOD OFFICES FOR SPECIFIC INFORMATION.

IF IT'S Wood IT'S GOOD

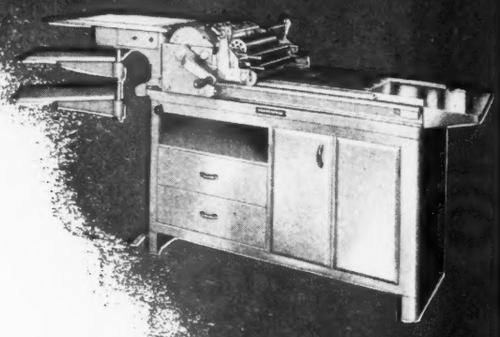
WOOD NEWSPAPER MACHINERY CORPORATION
PLAINFIELD, NEW JERSEY • SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17

Vandercook 219ABT Proof Press
Has adjustable bed and power inking for pulling acetate or glassine transparencies as well as black on white reproduction proofs.



Vandercook 68 Makeup Gauge
A new, precision device for making up type forms more quickly and accurately. Maximum form capacity 60x80 picas.

Vandercook 215 Proof Press
Especially designed for photoengravers to handle small plates in black and white, and color. Power inking. Maximum plate or form 14" x 18".

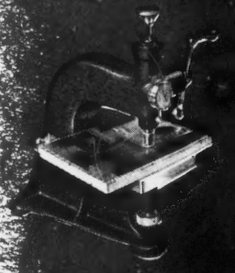


Save Press Time and Labor Time! Save on Over-all Costs . . . with Vandercook Pre-Press

How else can you increase production and reduce your costs except by adopting more efficient methods? Surely you can't make savings on materials or wages. Nor can you probably make any substantial cuts in your plant overhead.

For this reason, we believe that Vandercook Pre-Press can help you speed up production in all departments . . . give you more printed sheets from your presses . . . and enable you to improve your quality. Why not ask us for further information?

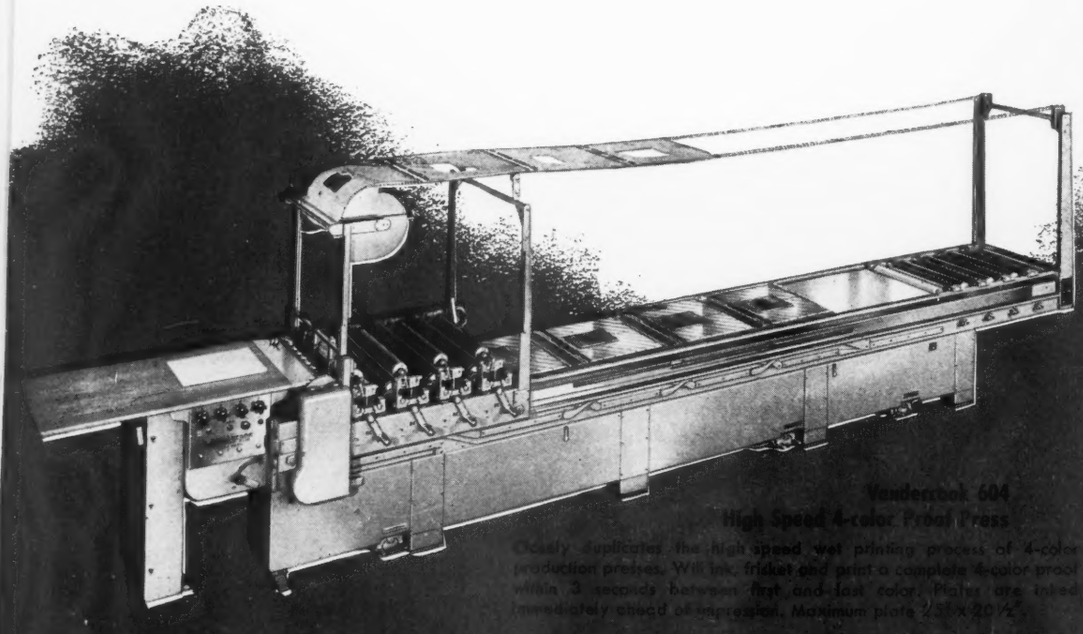
Vandercook 9 Plate Gauge
For checking the thickness of flat or curved plates up to 18" wide under printing pressure.



VANDERCOOK PRE-PRESS ...CUTS COSTS!

VANDERCOOK & SONS, INC.
900 North Kilpatrick Ave., Chicago 51, Illinois

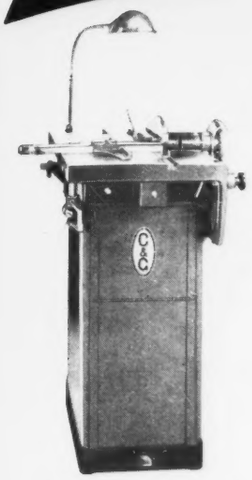
Largest Producer of Proof Presses and other Pre-Press Equipment for Letterpress, Offset and Gravure



Vandercook 11 Block Leveler
For accurately planing type high, line, aluminum, copper and plastic plates. Power driven. Capacity 14" x 18".

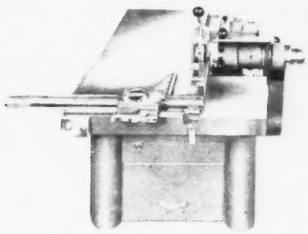
Vandercook 604 High Speed 4-color Proof Press
Closely duplicates the high speed wet printing process of 4-color production presses. Will ink, register and print a complete 4-color proof within 3 seconds between first and last color. Plates are inked immediately ahead of impression. Maximum plate 23¾ x 29½".

FOR PROFIT'S SAKE . . . CHECK THE COMPLETE LINE OF MORRISON SAW TRIMMERS AND ALLIED MACHINES



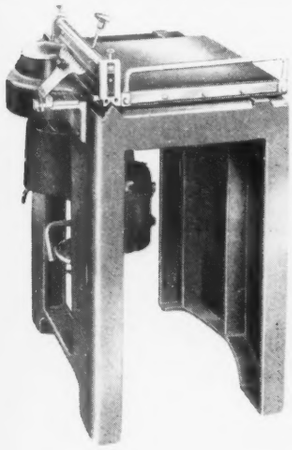
MORRISON MODEL 3-A SAW TRIMMER

Clamps the work behind the gauge for improved visibility, easier handling, and greater accuracy. A must for economy and efficiency minded composing rooms.



MORRISON MODEL "45" SPECIAL

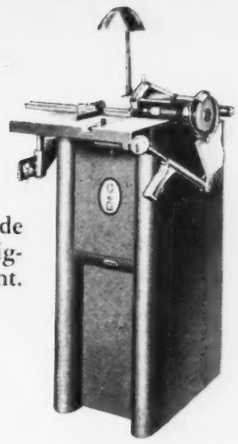
Here's a low-cost saw trimmer that embodies most of the features of the higher priced Model "45" and Model 3-A, with many of the parts and attachments interchangeable. "Behind the gauge" work clamp is standard, but conventional "ahead of the gauge" clamp may be supplied as optional equipment. Also available in a cabinet model.



MORRISON PLATE BEVELER

Puts a perfect, burr-free shoulder or bevel on all plates. Cutters work from edge of plate, not the top. You get a smooth die-straight cut every time.

Other Morrison equipment includes: strip material cabinets, waste receptacles, Universal saw blades, router bits, and jigsaw blades.

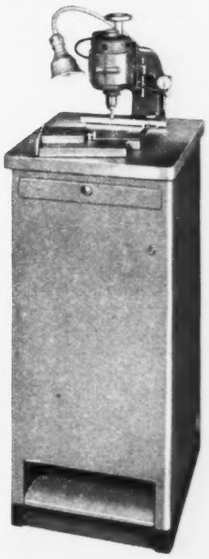


MORRISON MODEL 45 SAW TRIMMER

With pistol grip saw blade attachment. Features "Trigger Speed" saw adjustment.

MORRISON SLUG STRIPPER

"Proves itself to the men within 24 hours." Makes it easy to strip the face of any slug or type character to the exact thickness needed for base heights.



MORRISON ROUTER AND TYPE HIGH PLANER

Saves time in making corrections and changes, saves make ready time by having all cuts precision height. Has exclusive Morrison micrometer height gauge. Allows routing to center of a 34" cut.

Symbol of Operating Economy

THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

BALANCED METAL

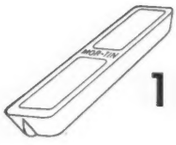
MINUS

1 lb. DROSS

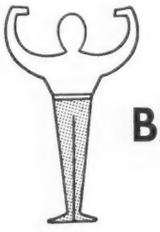
EQUALS

UNBALANCED METAL

THIS, PLUS...



1 lb. FEDERATED MOR-TIN



EQUALS

BALANCED METAL

THE FEDERATED MOR-TIN® PLAN is a simple and proved way to keep all type metal supplies balanced. It requires no large cash outlay because the money Federated gives you for your dross pays a good part of the cost. It works with all metals: Stereotype, Linotype or Intertype, Monotype or Ludlow.

Here's how the MOR-TIN PLAN WORKS . . .

You send Federated your dross and we will supply you MOR-TIN Metals on a pound-for-pound exchange basis. These metals, when added in direct proportion to the weight of the dross removed, will maintain the analysis and working standard of your supply.

You pay Federated only the difference between your dross allowance and the cost of the MOR-TIN . . . and that isn't much to assure smooth casting operations!

Federated will make periodic laboratory analyses and will supply you dross drums free.

If you would like more details, we can send you literature or have a salesman call. Just write Federated's Type Metal Department and ask.

Would you care to have information on Federated SAVALOY . . . a new stick-type flux . . . or on SAVEMET, the dry powder flux? If so, just ask and we'll send a pamphlet.

Federated Metals Division

Federated first in the non ferrous field FMD

AMERICAN SMELTING AND REFINING COMPANY • 120 BROADWAY, NEW YORK 5, N. Y.

CLINE
A.C. UNIT PRESS DRIVES
REELS, TENSIONS AND SPEED PASTERS

Preferred IN LEADING NEWSPAPER PLANTS THROUGHOUT THE WORLD . . .

Of the great newspaper plants throughout the United States *four out of every five* use Cline-Westinghouse Electrical Equipment. Many of them have for years standardized with Cline and specify it whenever additional equipment is needed.

In South America, in Canada, England, South Africa, Australia, Egypt and Scotland, Cline Electrical Equipment also leads the field.

For Newspaper Plants

Unit Press Drives . . . Controls
Group Press Drives
Reels . . . Automatic Tensions
Speed Pasters

Electronic Controls for motor drives, color registering and matching, side margin and folder web controls.

Winders and unwinders complete with variable voltage drives and tension control devices.

Cline Mechanical Equipment

Paper Roll Handling Equipment
Mail Room & Press Conveyors
Stereotype Plate Droppers and Conveyors

For Commercial Printers

Drives for all types of presses.

Control Equipment for presses, binding, electrotype, stereotype and composing machinery.

Among the recent newspapers installing or specifying Cline-Westinghouse are the following:

El Siglo, Bogota, Colombia	**Elizabeth, N. J., Daily Journal**
Washington Times Herald	**Kansas City Star**
Illinois State Journal	**Syracuse Herald**
Gannett Newspapers, Rochester	**Denver Post**
Ottawa, Canada; Journal	**Norfolk, Va., Newspapers Inc.**
La Razon, Buenos Aires, S.A.	**Toronto Daily Globe**
Newark Star Ledger	**Wilmington News**
Birmingham News & Post Herald	**Seattle Times**
El Pais, Montevideo, S.A.	**Atlanta Journal**
San Jose Mercury News	**Los Angeles Times**

From our offices in Chicago, New York and San Francisco and through Engineers located at 46 strategic points we can serve by analyzing production problems and suggest how Cline Equipment might help.

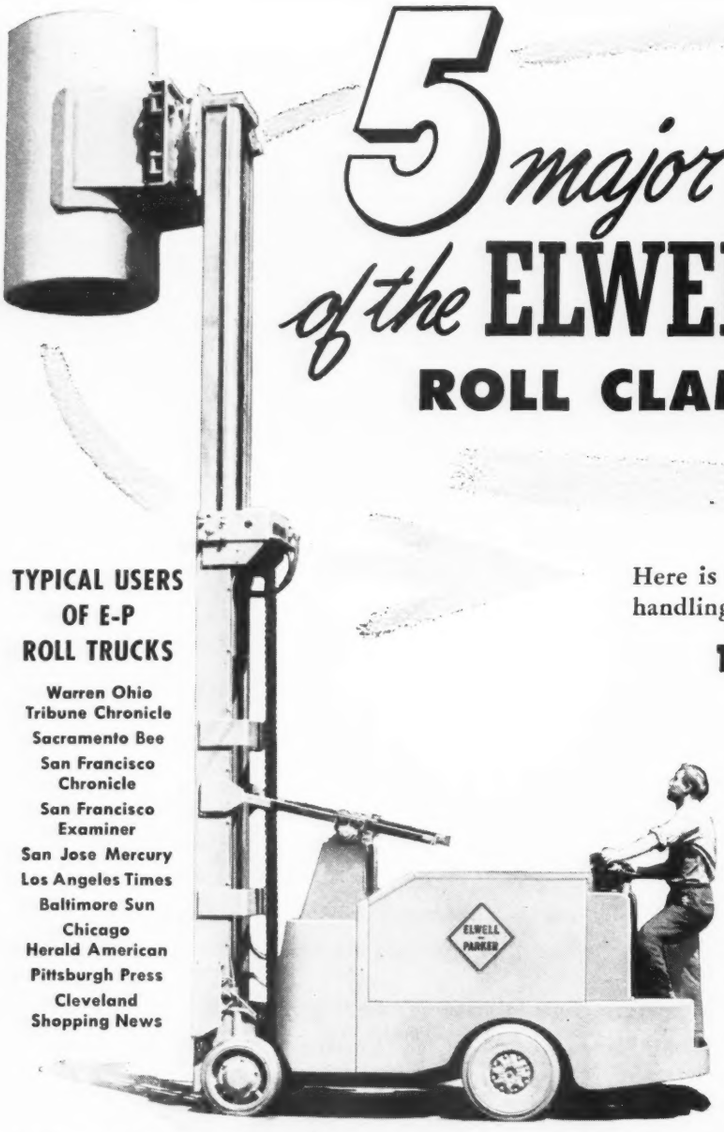
CLINE ELECTRIC MANUFACTURING COMPANY
MAIN OFFICE: 3405 West 47th Street, Chicago 32, Illinois

WESTERN OFFICE
410 Bush Street
San Francisco 8, Cal.

CLINE SYSTEM

EASTERN OFFICE
220 East 42nd St.
New York 17, N. Y.

5 major advantages of the ELWELL-PARKER ROLL CLAMP TRUCK



Rolls can be lifted 17½' for extra high stacking.

TYPICAL USERS OF E-P ROLL TRUCKS

Warren Ohio Tribune Chronicle
Sacramento Bee
San Francisco Chronicle
San Francisco Examiner
San Jose Mercury
Los Angeles Times
Baltimore Sun
Chicago Herald American
Pittsburgh Press
Cleveland Shopping News

Here is why this Elwell-Parker is unmatched for roll handling of newsprint, ink drums, etc.

1 SNUG STACKING — Close, orderly storage, impossible with many similar devices, is easily achieved with this truck because its clamp can securely grip rolls short of their maximum diameter.

2 ADJUSTABLE CLAMP PRESSURE—Grip is safe and positive, yet pressure can be varied for different papers or kinds of wrappers.

3 NO PALLETS NEEDED—One user saved 20% in space alone because no dunnage strips or pallets are required.

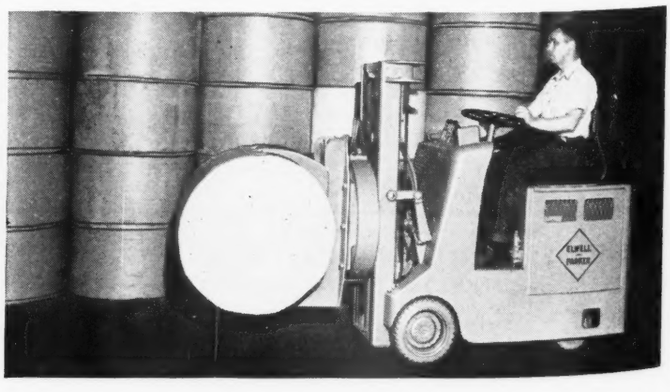
4 VERTICAL OR HORIZONTAL HANDLING —This Elwell-Parker will both carry and stack rolls in either position, and can save time by rotating rolls while truck is traveling.

5 NO STOCK DAMAGE—Many E-P roll handlers have quickly repaid their cost by reducing spoilage to practically zero.

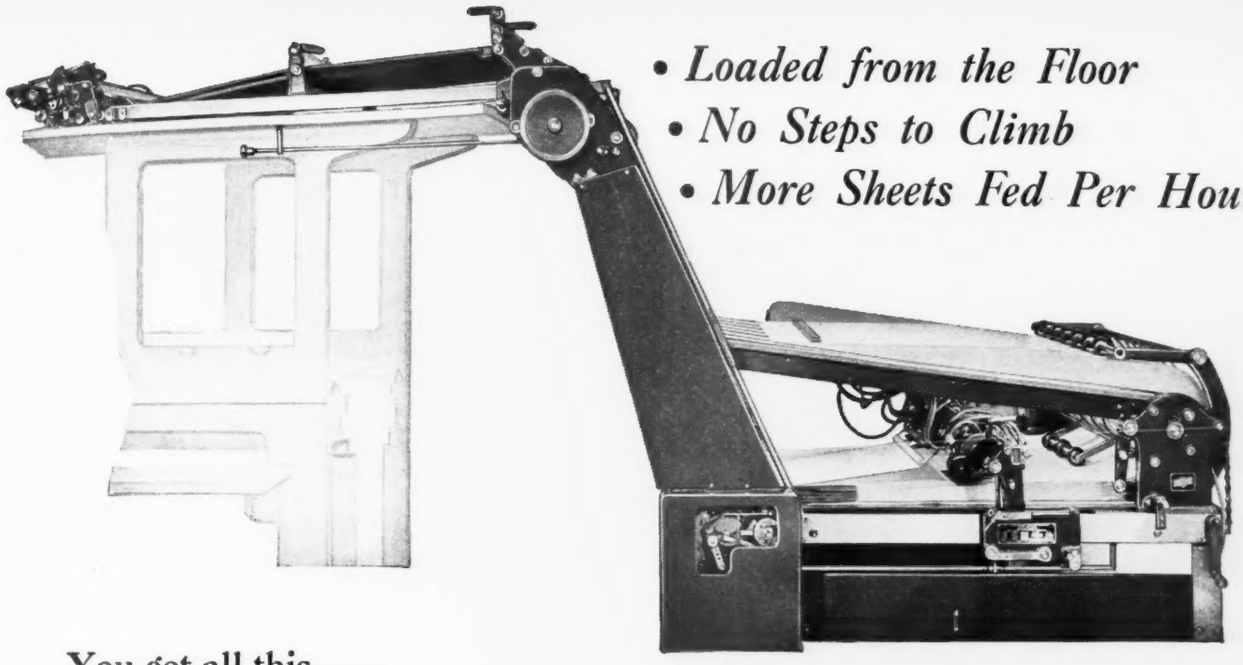
Get all the facts **on this finer truck that affords the *best way* to handle paper rolls. Write for E-P Reporter No. 8. The Elwell-Parker Electric Company, 4195 St. Clair Avenue, Cleveland 3, Ohio.**

Here two are stored simultaneously.

Horizontal pick-up—truck's uprights tilt forward so clamp can engage roll at correct angle, needing no forward thrust.



ELWELL-PARKER
POWER INDUSTRIAL TRUCKS
Established 1893



- *Loaded from the Floor*
- *No Steps to Climb*
- *More Sheets Fed Per Hour*

You get all this.....

and Improved Register too....

with Christensen CONTINUOUS SUCTION Feeding

The CHRISTENSEN CONTINUOUS SUCTION FEEDER is loaded from the floor. No steps to climb; no railings to clear. This makes for convenience and safety.

Continuous reloading does away with loading stops. Your press keeps right on producing, turning out more printed sheets per hour.

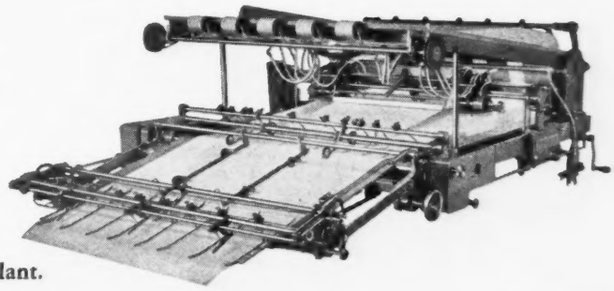
Sheets are suction separated — no marring of surfaces — and fanned out on top of loader board, giving surer separation and better feeding, especially with stock that is tacky.

Fed in a steadily moving stream, sheets reach press guides in s-l-o-w motion, assuring better register.

Vacuum caliper guards against feeding of more than one sheet at a time — also makes it unnecessary to reset for stock of different weights.

The net result is increased production, better printing, more profit.

For plants lacking space behind press FEEDBOARD MOUNTED TYPE is available —



Ask us to show you how these claims will work out in *your* plant.

Christensen • Dexter • McCain

Modern Machines for Printers and Binders

Dexter Folder Company, General Sales Offices, 330 West 42nd Street, New York 18, N. Y.

Branch Offices, Domestic and Foreign Agents

NEW ENGLAND

THE OLDEST NAME IN

PRESS BLANKETS

THE GOING IS TOUGH, but we at New England Fibre Blanket Company have managed to keep ahead of materials shortages, and can keep your presses packed with the same high-quality blankets as always.

OUR REGAL MONOCORK and IDEAL Tympans give the pressman his best assurance of continuous, day-in-and-day-out maximum printing! And the price is not ridiculous.

WE CAN ALSO SUPPLY our famous Red Rubber Bottom Blankets in limited quantities.

YOU BE THE JUDGE!

NEW ENGLAND
FIBRE BLANKET COMPANY

Branches:
NEW YORK
CHICAGO
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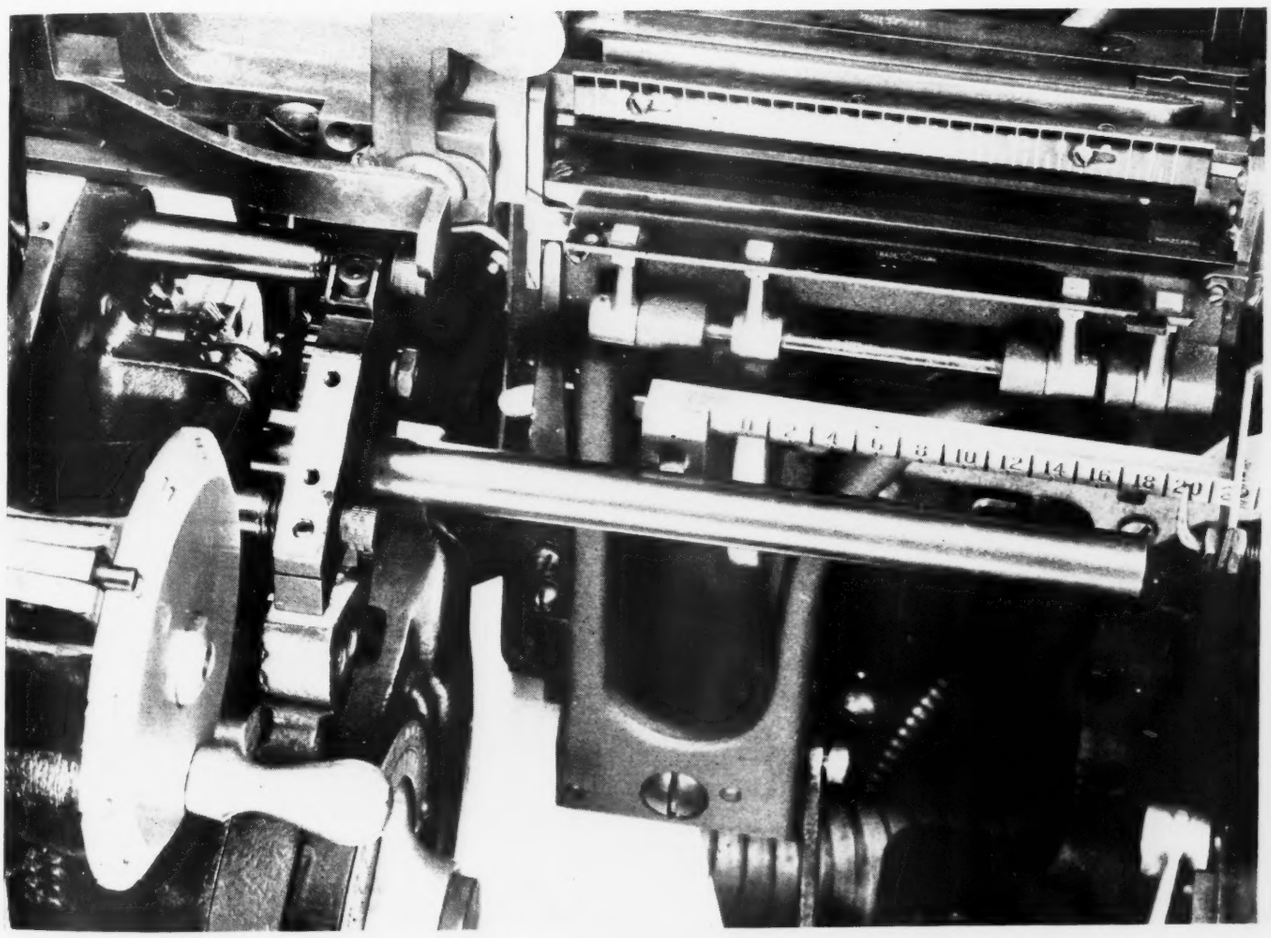
WORCESTER, MASSACHUSETTS, U. S. A.

READY FOR DELIVERY...

The Mohr Saw Synchronized with the Model "E" Star Automatic Quadding Attachment!

EVEN for machines without Saws, the Model "E" will have the same advantage — permitting measure changes in one operation, instead of two.

Shown here is the STAR Quadder's improved method of synchronized assembler slide and vise jaws. Note the adjustable bracket which permits mechanical squaring off of saw bracket with assembler slide link.



New brochure available

PRECISION TRADE ★ MARK

LINOTYPE PARTS COMPANY

Factory and Main Office
SOUTH HACKENSACK, N. J.

INCORPORATED

Branch Office
1327 BROADWAY, KANSAS CITY 6, MO.

CHICAGO · MINNEAPOLIS · DENVER · NEW YORK · BOSTON

7 OUTSTANDING FEATURES

that Recommend Cutler-Hammer Press Drives

to publishing executives looking for economy, dependability and production

1 ***The Cutler-Hammer Press Drive and Control cost less initially, cost less to install, cost less to maintain.***

Clearly, this simple drive consisting of a small constant speed motor and a single adjustable speed driving motor costs less than a drive using multiple motors. Clearly too, the Cutler-Hammer Control for this drive, requiring no rectifier equipment, the equivalent of an ac-dc converter, with the complex associated equipment conversion apparatus must have, costs less.

As a matter of accepted fact, the installation cost of the ac 2 motor drive is from 30 to 40% less than for other drives. Moreover, the control for the Cutler-Hammer Drive is in the form of a factory mounted and wired cubicle which can be installed in your plant easily and rapidly.

The alternating current motor is the most rugged of all and has only collector rings as sliding contacts. The Cutler-Hammer Control is made up of rugged magnetic components standard throughout industry, and lacks those fragile parts that cause so much trouble elsewhere. An industrial duty magnetic clutch is used in place of the ratchet type overriding clutch, eliminating the side strains and unequal bearing and gear teeth wear associated with the latter type. Moreover, the magnetic clutch eliminates the use of a brake on the large motor which on the old style drive was released and set on each inching operation. On the C-H Drive, the magnetic clutch serves as the large motor brake, giving smooth, rapid, positive braking action. These features insure long, dependable service with reduced maintenance.

2 ***The Cutler-Hammer Press Drive simplifies the task of putting an edition on the press.***

The adoption of a magnetic clutch provides a smooth cushioned start with gradual acceleration to threading speed. The pressman has better control of plate cylinder position, and fewer jogging operations are required in replating a press. Moreover, all steps of acceleration are so smooth, there are no damaging shocks or jerking of the fragile web.

The new Cutler-Hammer Controller has 90 definite speed points with consequent smaller increments between points. Acceleration to any desired speed or to full printing speed is exceedingly smooth, is entirely automatic, and full speed acceleration is accomplished in 40 seconds. Acceleration curve is virtually a straight line.

3 ***The Cutler-Hammer Drive provides highest efficiency of operation.***

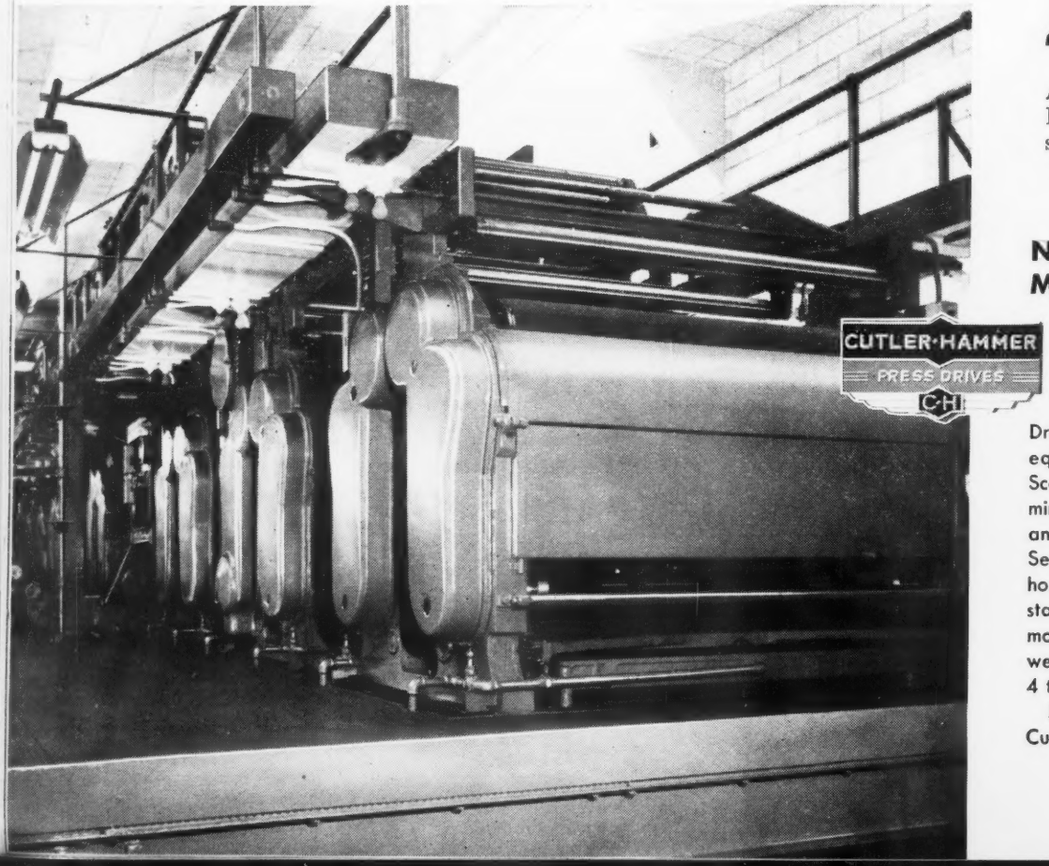
The efficiency of the alternating current motor is conceded throughout industry. The wound rotor motor especially demonstrates its efficiency on today's high speed presses operating with high speed pasters.

Since the C-H Drive employs a small constant speed motor for starting, current inrushes are far below those for main motor starting. *Moreover, in the Cutler-Hammer system, the starting motor also turns the driving motor through the magnetic clutch until the main motor contactor is closed* (whereupon the clutch drops out).

The use of the magnetic clutch permits the use of a smaller high speed driving motor.

4 ***The Cutler-Hammer Drive Controller provides all the flexibility you want.***

As mentioned before, the new Cutler-Hammer Controller provides 90 different speed points. This feature is achieved by a



NEW
MILWAUKEE SENTINEL PRESSES
100% Cutler-Hammer Equipped

A new modern press installation just recently completed in the plant of the Milwaukee Sentinel is 100% Cutler-Hammer equipped—with C-H Press Drives, new Control equipment and Conveyors. With this equipment, it is possible to thread newsprint into the Scott presses at 10 revolutions of a press cylinder per minute. Speed of the presses is then raised smoothly and swiftly by means of the new control until 90,000 Sentinels are being printed, folded and delivered per hour. The press units are equipped with two 10 h.p. starting motors and two 200 h.p. and two 100 h.p. motors. Drive is completely automatic. In event of web break, switches stop presses automatically in 4 to 5 seconds.

In the same room are older presses also completely Cutler-Hammer equipped.

unique scheme of resistor design. It provides not only added smoothness of acceleration, but controlled acceleration to desired printing speed, subsequent minute changes in speed, and smooth deceleration. It is also possible to proceed to a stable speed intermediate between threading and actual printing speed.

A further provision of 18 interlock circuits affords tremendous flexibility as in the case of accessory press equipment, dryers, valves, etc.

5 ***Both Drive and Control are economical of space.***

The small number of elements in the Cutler-Hammer Drive take up less space. All elements are mounted in line, forming a long, narrow, compact "package" alongside the press. Where access to paper reels is a factor, the Cutler-Hammer Drive can be suspension-mounted overhead, out of the way of reel trucks.

The control cubicles themselves are compact and can be installed out of the way in small rooms elsewhere. Their space economy is especially notable in comparison with equipment using rectifier apparatus.

6 ***The simple, standard control components pose no problem to your plant electrical men.***

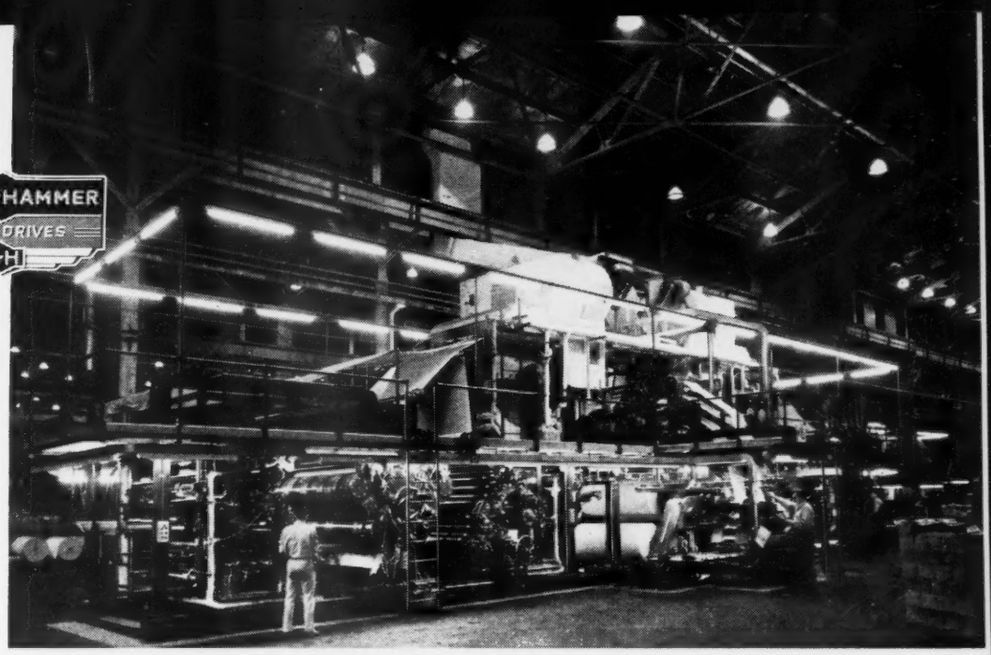
Although the Cutler-Hammer Control system offers a wide range of advantages, the components used in this control are simple, standard, known throughout industry. There are no puzzlers here to baffle your own electrical men and to require factory-expert servicing and attention. There are no unfamiliar rectifier components to cause confusion and delay.

7 ***The Cutler-Hammer System is the safest of all systems.***

Complete preventive safety is established as standard in the Cutler-Hammer Drive and Control system. Only fully intentional operation is possible. Bell and light warning is compulsory not only to inching the press but to acceleration to running speeds.

Buy no drive until you have seen the new Cutler-Hammer Press Drive in operation. CUTLER-HAMMER, Inc., 1460 St. Paul Ave., Milwaukee 1, Wisconsin.

CUTLER-HAMMER
PRESS DRIVES
C-H

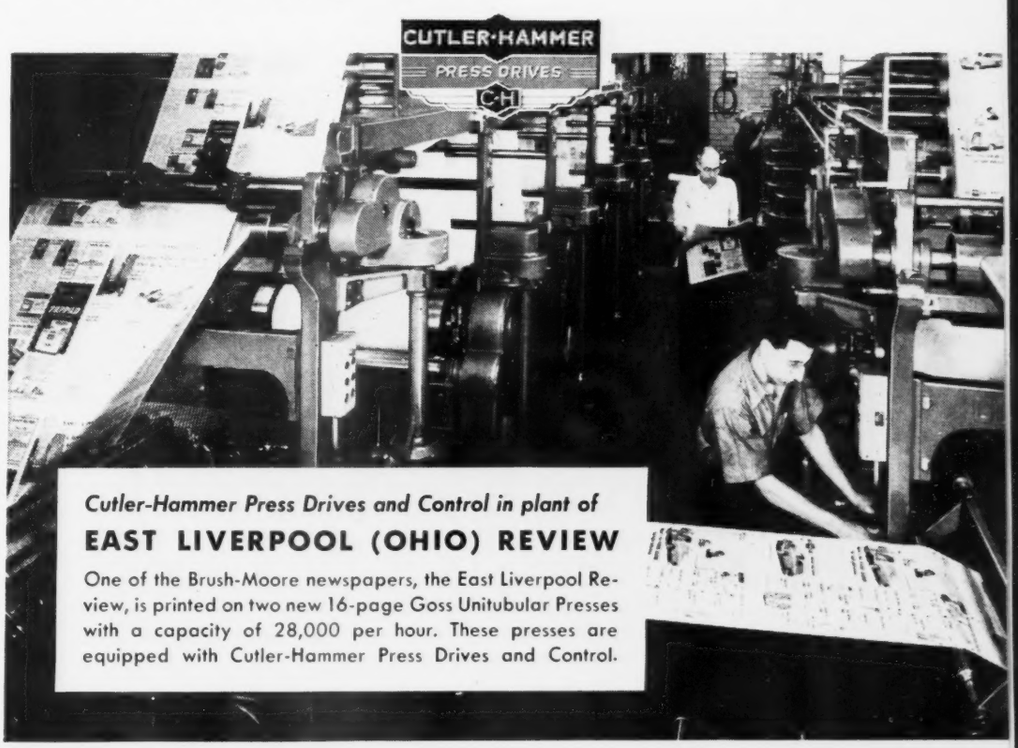


Cutler-Hammer Press Drives and Control at

THE CUNEO PRESS INC. OF INDIANA, KOKOMO, INDIANA

Shown here is a 5-color Cottrell Perfecting Press in the plant of The Cuneo Press Inc. of Indiana at Kokomo, Indiana. This press has been in operation more than a year and prints the color forms of the American Home Magazine. This press is driven by two Cutler-Hammer 125 h.p. Drives fully equipped with Cutler-Hammer Control. There are many unusual features of the control such as interlocks that start and stop the dryers as the press itself starts and stops and the device that automatically throws the printing cylinders off compression if there is a break in the web.

In addition, in this same plant, there are the following: a Cutler-Hammer 200 h.p. drive and control installed on a 10-unit Goss press, a C-H 150 h.p. drive and control on each of two Babcock 64-page 2-color presses, two C-H 150 h.p. drives and control on each of two 5-color Babcock perfecting presses just placed in operation, and there will be two C-H 200 h.p. drives and control on a 5-color 2-web Babcock press yet to be installed.



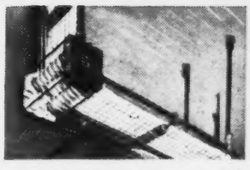
Cutler-Hammer Press Drives and Control in plant of

EAST LIVERPOOL (OHIO) REVIEW

One of the Brush-Moore newspapers, the East Liverpool Review, is printed on two new 16-page Goss Unitubular Presses with a capacity of 28,000 per hour. These presses are equipped with Cutler-Hammer Press Drives and Control.

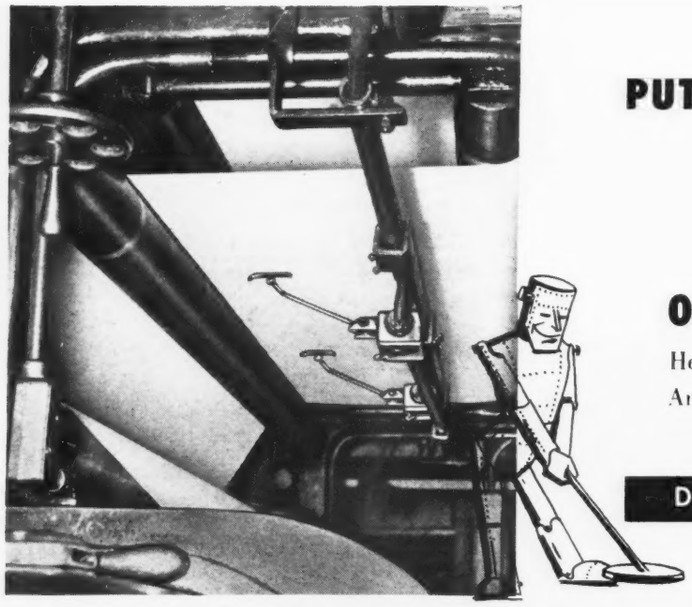
Cutler-Hammer Cylinder Brakes

Stop presses safely in approximately 3 seconds, completely relieve gearing of excessive forces and harmful shocks. Each brake individually adjustable yet automatically coordinated with other brakes.



Cutler-Hammer Newspaper Conveyors

Used in practically every conveyor-equipped plant in North America. Standard Duty handles up to 56 pages at any speed up to 60,000 I.P.H. Heavy Duty handles up to 96 pages at any speed up to 60,000 I.P.H.

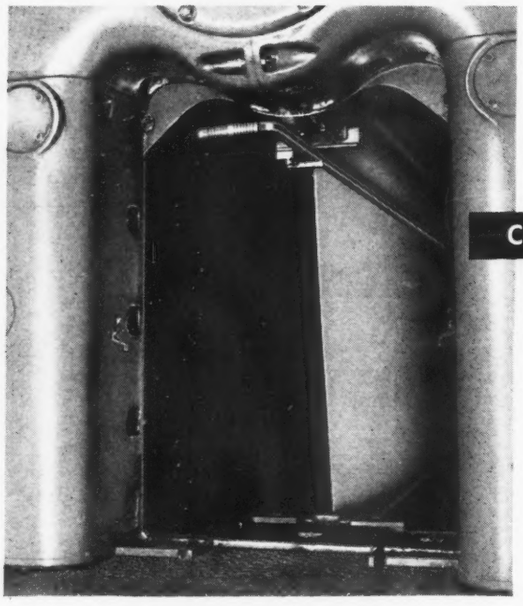


PUT THE *Cooksey Team* ON YOUR PRESS CREW

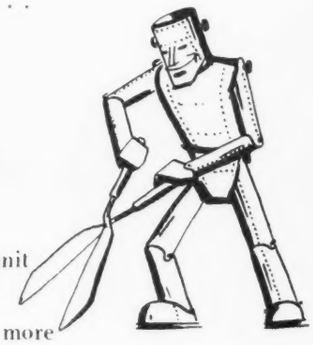
Here's the one and only *complete* web control system! And here's how it prevents lost time due to wrap-ups.

Detects Breaks

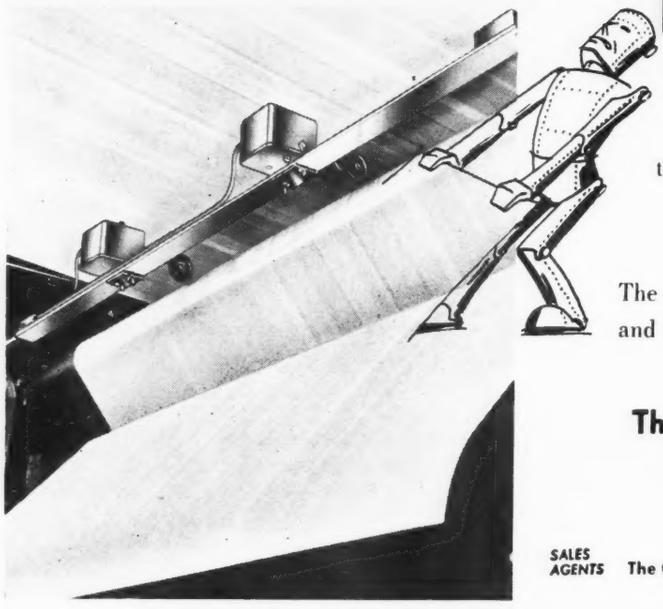
When the web breaks, the sensitive spring-loaded detector instantly and simultaneously causes the web to be severed . . . actuates the electric trolley. . . and stops the press.



Cuts and Clamps



The sheet is severed close to the unit to insure a short tail and is securely clamped to prevent entry of any more paper into the unit—also prevents oncoming sheet from falling into the inking rolls.



Clears Unit

The rubber trolley wheel presses the web against the pipe roller, clearing the unit of paper and preventing backlash of the web into the unit.

The Cooksey System is a "*must*" for present-day competitive and operating conditions. Get facts and figures now!

The Collmar Corporation

35 E. WACKER DRIVE, CHICAGO 1, ILL.

SALES AGENTS The Goss Printing Press Co., Chicago — R. Hoe & Co., Inc., New York

Wood Newspaper Machinery Corp., New York

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We are more than pleased to tell you of the ever increasing use of BEVERIDGE MATS. Their popularity for curved newspaper work, for high shrinkage, for autoplate equipment, for multi-cast work as well as commercial flat work has resulted in the highest output of mats this company has ever experienced.

Today we can supply mats in all sizes, all shrinkages. Their uniformity is unequalled.

Write today about your mat requirements or problems. Better still, see us at the A.N.P.A. Mechanical Conference, Edgewater Beach Hotel. All of our salesmen and our chief chemist will be there to discuss your mat requirements.

BEVERIDGE MATS are manufactured and distributed by

the New Products Division of

THE BEVERIDGE PAPER COMPANY

705 W. WASHINGTON STREET • INDIANAPOLIS 4, INDIANA

All mats available for immediate shipment plus a complete line of stereotype supplies and equipment

60 YEARS' EXPERIENCE IN MAKING PRECISION PAPERS IS EMBODIED IN BEVERIDGE DRY MATS

Front-page Scan-a-graving helps win Ayer Cup!

THE DAILY NEWS-TRIBUNE
UN Troops Storm Han River
Next Wage Move Up to Labor
Mac Prophesies New Stalemate
Premier of Iran Killed During Religious Riots
Rejected Lover an Spr Wounds 3 Before Capture
Ministers Hit Gamblin
AWARD
NEWSPAPER TYPOGRAPHY

***The Daily News-Tribune* of LaSalle, Ill.** (Circ. 14,071), winner of the F. Wayland Ayer Cup in the twenty-first annual exhibition of newspaper typography, presswork, and make-up. Commenting on the award, the judges said they considered the paper as "one of the finest printing jobs we have seen anywhere at any time." Winning papers, it was said, harmoniously combined pictures with headlines on their front pages.

The Daily News-Tribune of LaSalle, Illinois —recent winner of the F. Wayland Ayer Cup for excellence in typography, presswork, and make-up—is the first newspaper of its size to win the cup. At 32, *News-Tribune* Publisher Peter Miller is the youngest publisher of a winning entry.

Competing newspapers were judged on editions of March 7, a date chosen by lot. A Fairchild Scan-a-graver was installed at the *News-Tribune* just in time to be used on that edition. Five clear, crisp Scan-a-gravings were used in the prize-winning paper, one of them featured on the front page.

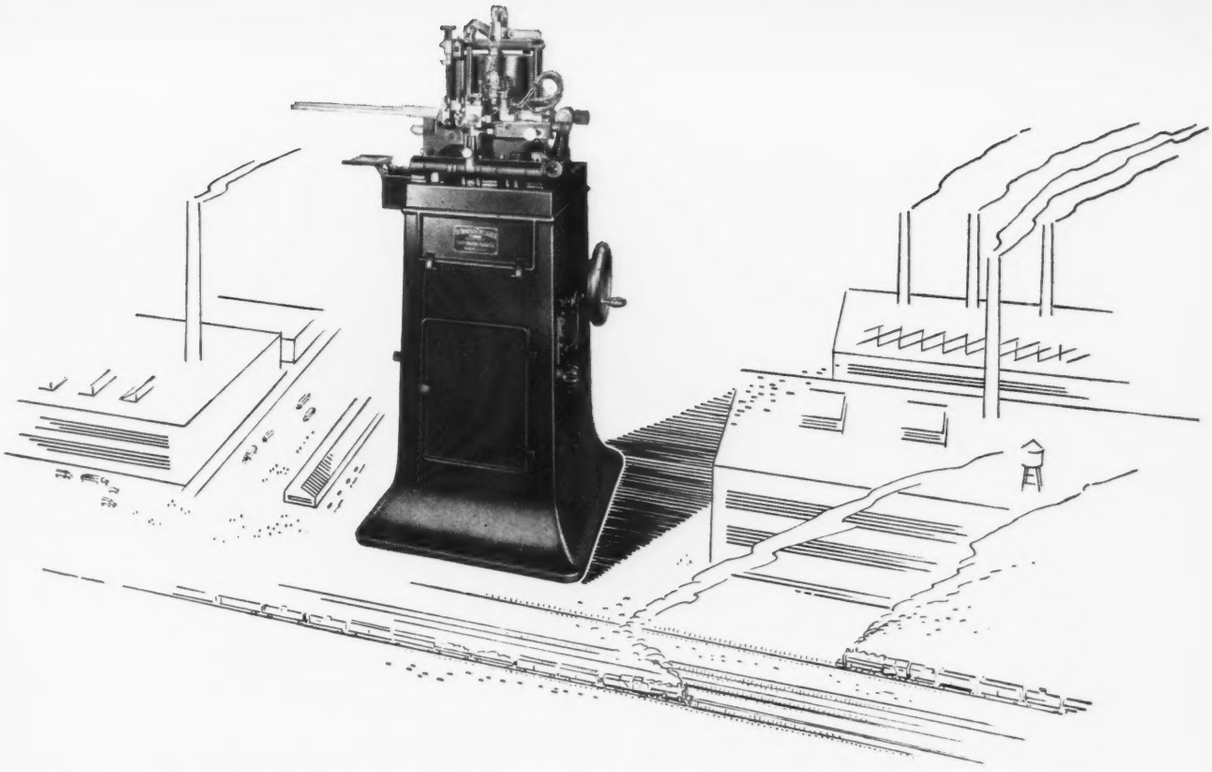
Said John N. Barron, the paper's composing-room foreman: "Scan-a-gravings are as good as or better than what we were using. The cuts used in the March 7th issue . . . played an important part in winning the Ayer award."

Two other Scan-a-graver users won honors in the same contest: *The Elizabeth Daily Journal* (N. J.), third honorable mention in the "10,000 to 50,000" class; and the *Waukesha Daily Freeman* (Wis.), second honorable mention in the "under 10,000" class.

Scan-a-graver quality counts!

FAIRCHILD
SCAN-A-GRAVER

Hundreds of papers, large and small, are producing sharp, clear cuts daily on the Fairchild Scan-a-graver. Write for more data to *Fairchild Camera and Instrument Corporation, 88-06 Van Wyck Boulevard, Jamaica 1, New York. Dept. 100-21.*



a complete type foundry for the printer

the MONOTYPE-THOMPSON

Giving to the printer and typographer type and decorative material of the highest quality, the MONOTYPE-THOMPSON TYPE-CASTER promotes efficiency in composing room operation. Never before in the history of the printing industry has a type-caster been equipped with a wider range of typographic material than is offered users of the MONOTYPE-THOMPSON. Every Monotype matrix ever made for machine composition and display type-casting up to 48 point is available for casting on the THOMPSON. These now include matrices for casting more than four hundred different faces in sizes from 6 to 48 point, more than a thousand ornaments, single-piece borders and other decorative designs, and a large assortment of special characters. The MONOTYPE-THOMPSON assures at all times a practically unlimited supply of new type, quads, spaces, leaders, and decorative material at production speeds that enable the user to pocket the savings of NON-DISTRIBUTION.

Descriptive folders on the MONOTYPE-THOMPSON and the MATERIAL MAKER available on request

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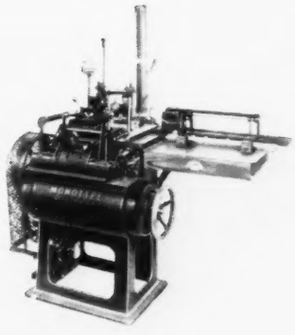
Specify MONOTYPE For the Finest in Printing

(Set in Monotype Stymie)



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MATERIAL MAKER

A highly specialized machine for making: Rules, Leads and Slugs, Column Rules, Ornamental Borders, Single-Column Want-Ad Rules, Braces, and Cut-Off and Decorative End Dashes.

Congratulations

to this year's winner:

The La Salle (Ill.) Daily News-Tribune

for the third successive year

THE F. WAYLAND AYER CUP

awarded to a newspaper using BURGESS MATS

"One of the finest printing jobs we have seen anywhere at any time." This was the comment of judges recently in awarding the F. Wayland Ayer Cup—for excellence in typography, presswork, and make-up—to the Daily News-Tribune of La Salle, Illinois.

Smallest daily ever to win the coveted trophy, the News-Tribune (Circulation 14,071) competed with about 800 newspapers.

We are proud to have supplied the stereotype mats used by the La Salle News-Tribune—and those used by the New York Times, winner of the Ayer Cup in 1950 and 1949. Big or small . . . newspapers all over the country are doing a better job with Burgess Mats!

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats

Freeport, Illinois

A Laboratory Product
BURGESS
Chrome
MATS

NOW... AUTOMATIC CUTTING ACTION

Challenge STYLE 370 PAPER CUTTER Size 37 inch

Here's the smoothest operation you ever saw.

To make a cut with the new and improved Challenge 370 Paper Cutter, the operator simply moves the two-hand safety levers . . . and the hydraulic clamp comes down, followed by the power knife bar. The clamp is always on the stock ahead of the knife and both return automatically. The knife cannot repeat! The clamp may be used independently as a finder by touching the foot treadle.

This 37-inch cutter takes a pile of paper 4½ inches high and provides 38 inches in back of the knife, 20½ inches in front. Extensions at left and right measure 12x18 inches each.

"One-Shot" Automatic Metered Lubrication and many other features recommend the Challenge 370 Cutter to you. Get full details today!

675

Clamp operates automatically in unison with knife

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Office and Factories: Grand Haven, Michigan

"Over 50 Years in Service of the Graphic Arts"

Challenge

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DEALERS IN ALL PRINCIPAL CITIES

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an outstanding name in Plate-making Equipment

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paper spoilage getting your goat?

switch to MERCURY ROLLERS & BLANKETS

Quick, accurate make-ready can save a lot of paper! And uniform accurate inking throughout the press run can save even more. That is why today it is more important than ever to switch to Mercury Rollers and Blankets—they reduce paper spoilage. And they save operating costs in many other ways as well. Make us prove it!

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GOSS DUPLEX DEK-A-TUBE . . . 25,000-30,000 papers per hour. Any combination of units up to 48-page capacity with color.
GOSS UNITUBE . . . 30,000 papers per hour. Any combination of units from 8 to 48 pages with color.
GOSS DUPLEX UNITUBULAR . . . 36,000-40,000 papers per hour. Any combination of units from 8 to 48 pages with color.
GOSS UNIVERSAL . . . 36,000-40,000 papers per hour. (Single width, semi-cylindrical). Any combination of units up to 48 pages straight; 64 pages collect—with color.
Write for information on the Goss press that best fits your needs.
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Duplex Division: Battle Creek, Mich.
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it's GOSS again

OVER 700 GOSS HEADLINER UNITS SOLD SINCE '45

Publishers' preference for the Headliner can be attributed to Goss' leadership in developing ***"first"*** features — full range color flexibility . . . Tension-Plate Lock-Up . . . fully enclosed inking unit . . . continuous ink feed system . . . fingertip Colortrol . . . portable color fountains . . . preloaded cylinder and form roller bearings . . . enclosed oil-tight folding motion . . . folded-edge-forward delivery . . . "Y" type sub-structure.

As a result, the Headliner ranks ***first*** in sales.

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DUPLEX DIVISION: BATTLE CREEK, MICH. • GOSS PRINTING PRESS CO., LTD., PRESTON, ENGLAND

it's **GOSS** *again*

Huber salutes Hart Schaffner & Marx

...first in multi-color promotion material

...first in 4-color magazine clothing advertisements

...and now first with 4-color process ads for newspapers

Color sells—says Hart Schaffner & Marx. This spring their dealers proved it with beautiful 4-color ROP full pages in 35 newspapers! And this fall there will be a greatly expanded program.

The man behind this program, Lee P. Henrich, HS&M's Director of Advertising, says: "No advertisement can be better than the inks used. Fine art and fine plates require fine inks for faithful reproduction."

That's why Huber, the leader in newspaper color inks, is happy to support HS&M's pioneering of 4-color process ads for newspapers. Climb on the 4-color bandwagon. And remember: Huber's facilities are at your service to assure its success.

J. M. HUBER CORPORATION

Huber Products in Use Since 1780

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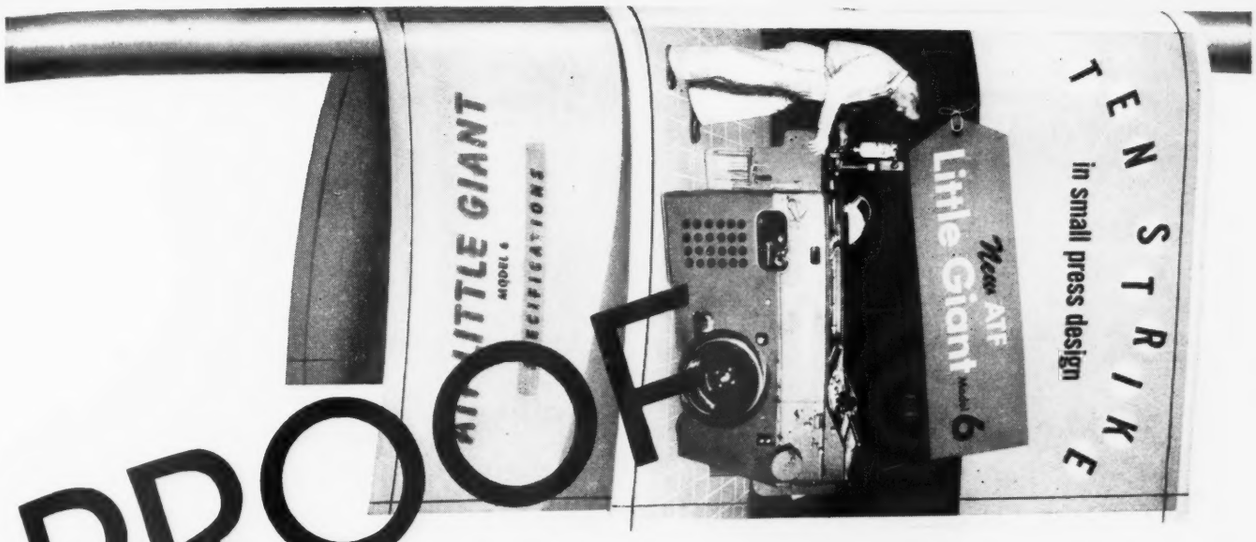
Sales Offices: Boston • Brooklyn • Chicago • New York • East St. Louis, Ill.

*REG US PAT OFF HS&M CHICAGO

Write for your copy

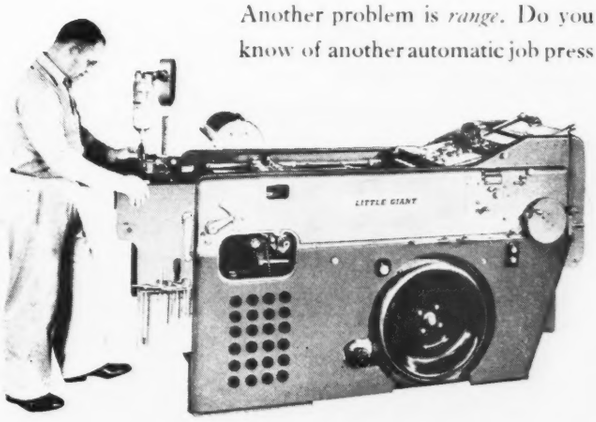


there's **only one** automatic job press

with the answers to **all** these problems

One of your problems is *production*. What other automatic job press—besides the ATF Little Giant—gives you such advantages as a speed range up to 5000 an hour, positive lock-up on the bed, 3-way automatic jogging, micromatic-set caliper?

Another problem is *range*. Do you know of another automatic job press—besides the ATF Little Giant—which can turn out such variety as onion skin, envelopes, postcards or 4 ply at 3000-4000 impressions an hour . . . and handle both long and short runs economically?



The third problem is *profits*. And you can see from the paragraphs above that your profits take care of themselves when the Little Giant takes care of production, range, quality and the pressman.

Get to know more about Little Giants. You may have many jobs the Little Giant can handle more economically than your present larger presses. Ask the ATF representative for *proof!*

American Type Founders

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Branches in Principal Cities

Manufacturers of Kelly Presses, Little Giant Presses, Chief Offset Presses, ATF-Webendorfer Web-fed Offset Presses and ATF-Klingrose Gravure Presses, Foundry Type and Process Cameras. Distributors of Mann Offset Presses, Challenge, Chandler & Price, Hamilton, Rosback and Vandercook Equipment for Composing Room, Pressroom and Bindery.

Nobody Makes a Pearl Like an Oyster

Here's a master of the pearl making industry . . . by nature, by inclination, by experience!

Here's a full fledged member of that group of the world's inhabitants known as specialists. The dictionary says they devote themselves to one subject. You can recognize them by the perfection of their products.

Look at today's printing plates . . . obviously the product of the highly skilled specialist known as the photo-engraver.

Another specialist is Chemco, whose sole interest has always been to produce specialized materials and tools for a highly specialized industry.

No outside interests or activities . . . no side products . . . not even a by-product. Just plate-making equipment, tools and supplies, the finest you can buy . . . anywhere!

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WRITE ANY CHEMCO BRANCH FOR SPECIFIC INFORMATION AND FOR SPECIALIZED HELP IN PLANNING FOR THE EQUIPMENT YOU NEED.

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DIRECTOMAT used by outstanding plants for direct pressure matrix molding.

ACRAPLATE used by outstanding plants for rubber and plastic plate making.

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LAKE ERIE ENGINEERING CORP

568 Woodward Avenue, Buffalo 17, New York

Offices in Principal Cities and Foreign Countries

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● Leading manufacturer of hydraulic presses—all sizes and types—stereotype molding... rubber and plastic plate making... rubber vulcanizing... metal working... forging... metal extrusion ... plastic molding... processing... special purpose.

R.O.P.

R.O.P. Could Mean Red Offers Profits

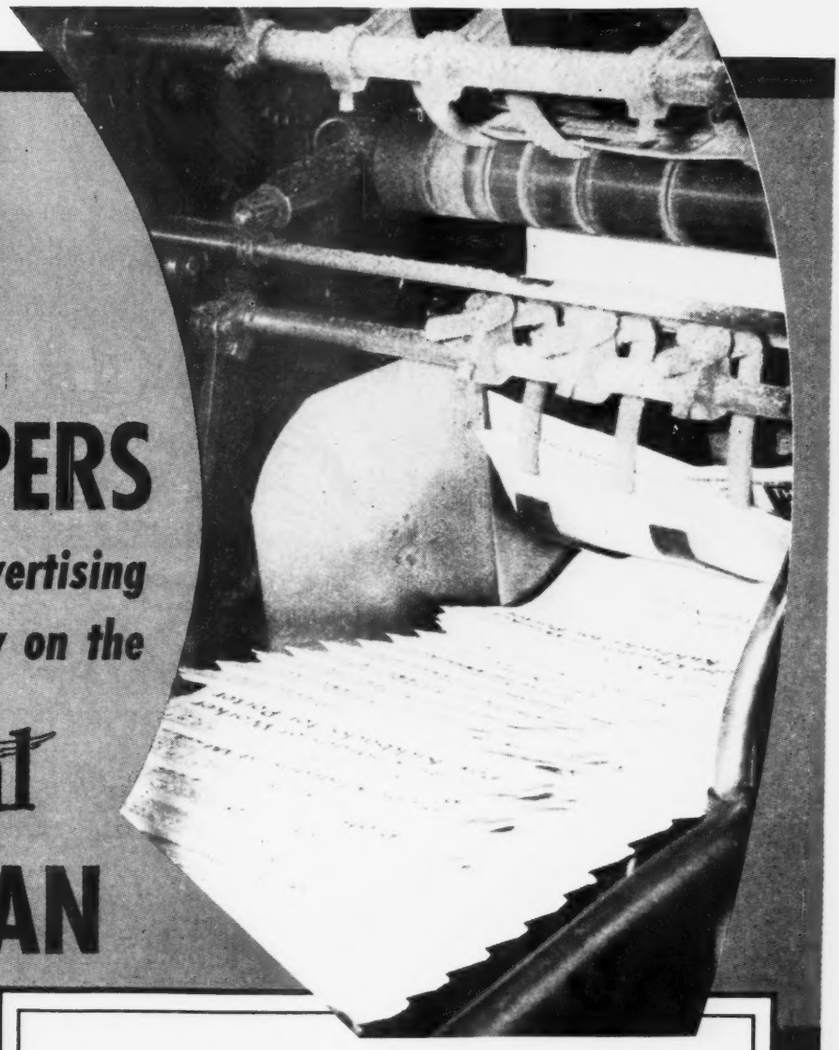
Yes, run-of-paper colors . . . red or any other effective colors . . . make profits for newspapers and advertisers alike. Color gets results in newspaper advertising . . . and advertisers buy results, not just space. R.O. P. color campaigns are increasing every day; they appeal to both local and national accounts. It's time to get on the color bandwagon, but if you can't see the profits for the problems, you will find a talk with IPI helpful. We have worked for years with many newspapers successfully printing color. This experience has given us an understanding of color unsurpassed in the newspaper field. We participated in the research and development of the standard process colors adopted by the A.N.P.A., the A.A.A.A. and the A.N.A. We have unexcelled laboratory facilities for the formulation and testing of inks specially made to your requirements.

We really can help you with your color printing problems. Write International Printing Ink, Division of Interchemical Corporation, 67 W. 44th St., New York 18, N.Y. Branches and service stations in 35 principal cities.

THESE EIGHT NEWSPAPERS

of the Top Ten in Advertising Linage for 1950 Rely on the

Imperial PLUS PLAN



Milwaukee Journal	44,649,859 lines
Chicago Tribune	43,179,051 "
New York Times*	39,574,371 "
Washington Star	38,854,833 "
Detroit News	36,962,387 "
Baltimore Sun	36,292,120 "
Miami Herald	36,249,618 "
Philadelphia Inquirer	36,019,931 "

Linage figures from Media Records.

*At present using the Imperial PLUS PLAN in composing room.

These highly successful publishers do not *guess* about the quality of their type metal. They take no chances on production losses through type metal deterioration. They *know* that the Imperial PLUS PLAN can be depended upon to keep the quality of their type metal under control at all times.

Hundreds of other daily and weekly newspapers likewise rely upon the Imperial PLUS PLAN for day-in and day-out quality in their working metal supply.

Periodic analysis, personal counsel, plus metal control, dross drum service—these comprise the Imperial PLUS PLAN. Ask your Imperial Type Metal man next time he calls.

Imperial

TYPE METAL COMPANY

SERVING THE GRAPHIC ARTS *Exclusively*

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

VULCAN
Press Blankets

Save TIME
Save INK
Save PAPER
Save EFFORT

IN TODAY'S economy, waste and needless expense have no place. Every saving you can make in equipment and materials is worthwhile.

VULCAN Newspaper Press Blankets promote economy because they assure you of longer press runs without changes. They are made to do their job right, with dependable ease, with a saving of pressmen's time and effort.

There is a VULCAN blanket or press packing combination for every type of press, old or new, and for every operating requirement. Save time, money and work with VULCAN Press Blankets.

VULCAN
RUBBER PRODUCTS, INC.

(Formerly Vulcan Proofing Company)

FIRST AVENUE AND 58th STREET • BROOKLYN 20, N. Y.

CHICAGO OFFICE: 333 North Michigan Ave., Chicago 1, Ill.

Pacific Coast Representative:
THE CALIFORNIA INK CO., INC.

Canadian Representative:
SEARS LIMITED, TORONTO

when the subject of BETTER INK comes up...

Who will have the information? No A. N. P. A. Mechanical Conference is complete without a discussion of this important factor in newspaper publishing.

You'll find a man at the Conference who's got the story on ink – the kind of ink that will give your paper a clear, clean-cut, attractive appearance. He's the Herrick representative.

He's the man who can tell you how and where to get an individualized news ink, compounded to suit just *your* pressroom conditions. Obviously, such an ink should be better. Awards won by Herrick users is testimony that it *is* better.

So when the subject of *better ink* comes up – the *Herrick Ink man* will have the information you want. Look him up at the Conference.

to suit your pressroom conditions

HERRICK Inks

William C. Herrick Ink Co., Inc.
Main Office & Plant
EAST RUTHERFORD • NEW JERSEY

4082

"It didn't take me long to find out why an ANSCO man is an asset to us!"

says:

Mr. ALBERT H. WAIN,

SUPERINTENDENT OF OFFSET,

Metropolitan Lithograph and Publishing Co.,

Everett, Massachusetts.

You, too, can improve your shop operation. When your Ansco Man calls again be sure to ask him how these REPRO-LITH THIN BASE FILM Features can help *you*.

• APPLICATIONS

For camera negatives from black-and-white line and halftone copies; for camera halftone negatives from black-and-white continuous tone copy; for camera line positives from halftone transparencies.

• MAXIMUM CONTRAST

High density and extreme clarity mean coal blacks and whiter whites.

• NO CHANGING OF DEVELOPERS

Processed in conventional, high-contrast developers, such as Reprodol. No time-consuming, costly change in processing solutions.

• PIN-POINT SHADOW DOTS

Dot edges come up needle-sharp in shadows.

• CLARITY IN WHITE AREAS

Stains and discolorations eliminated.

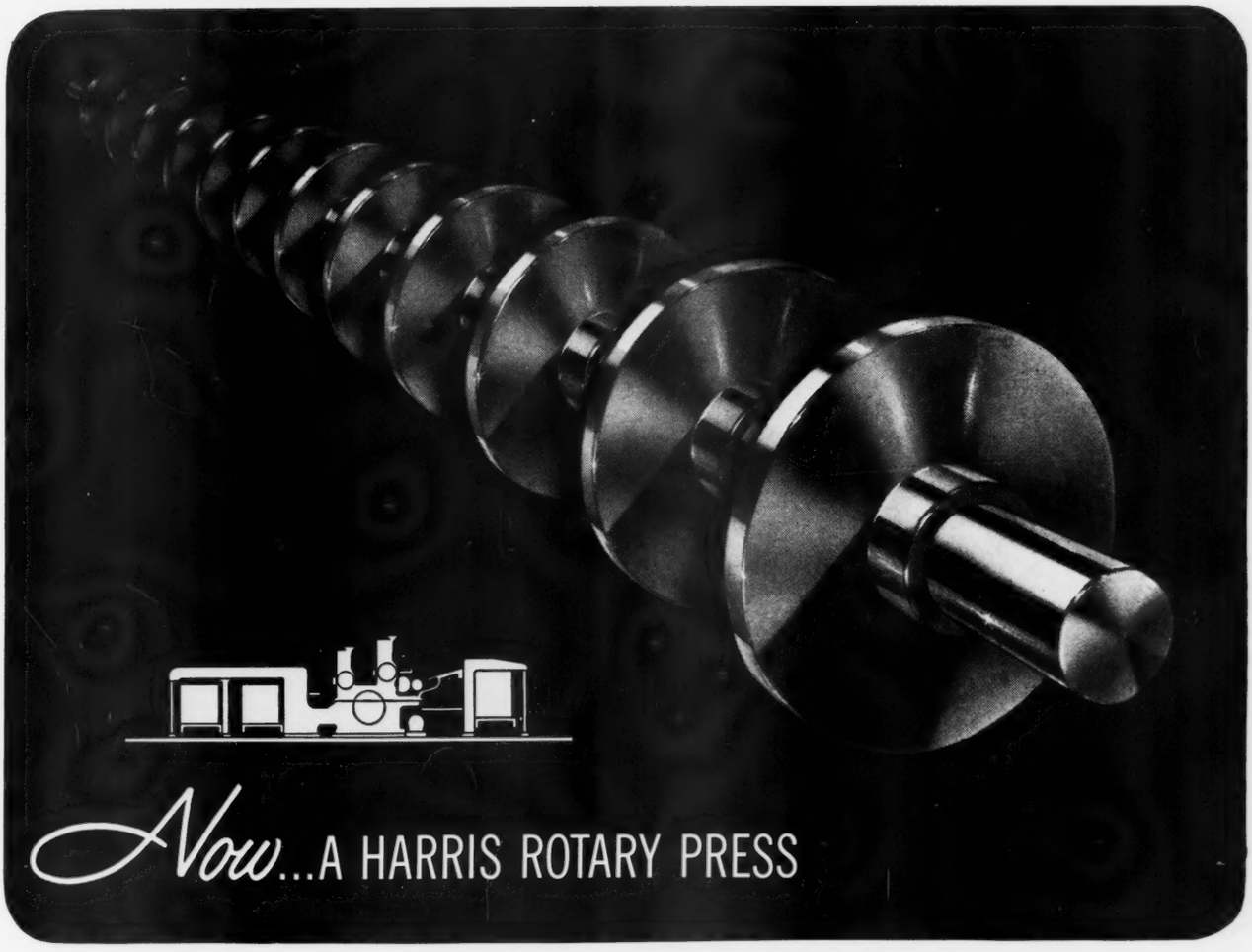
• STEEP GRADATION

Provides maximum contrast.

• GET GREATER ECONOMY WITH ANSCO REPRODOL

Longer life in trays and tanks, better keeping qualities, will process more film. Easy to mix, saves valuable time. Can't be matched for maximum contrast. Now available in a new 10-gallon size. Ansco, Binghamton, New York. A Division of General Aniline & Film Corporation. *"From Research to Reality."*

IN THE GRAPHIC FIELD IT'S ANSCO



with FEED ROLLS *for unequalled register*

Hairline register is easily controllable . . . every sheet feeds accurately, with the Harris feed roll register system. Gives positive control of the front register of the sheet; pushes the sheet tightly against the grippers and holds it with exacting precision, yet without damage to the sheet.

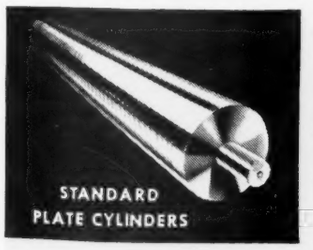
This is another extra feature of press design built into the new, two-color 45 x 65″ Harris rotary letterpress. It's another reason for the top-quality work which this specially-built press produces.

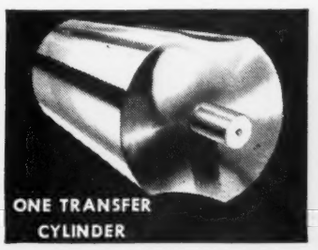
For instance, 5 *form rollers* on each color unit, assure smooth, even coverage on the most difficult solids. *Standard plate cylinders* use plates made with existing precision platemaking equipment. A *single transfer cylinder* between units makes only one grip and one release, thereby protects register and prevents damage to sheets. The *double delivery system* permits sheets to be fed to either of two piles or alternately to both.

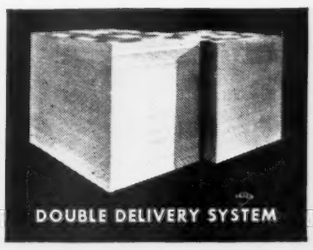
Quality printing can be made more profitable. May we discuss how this new rotary press can increase your production?

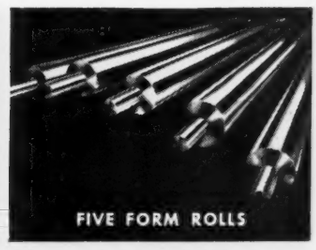
HARRIS-SEYBOLD COMPANY

GENERAL OFFICES, DEPT. G, CLEVELAND 5, OHIO

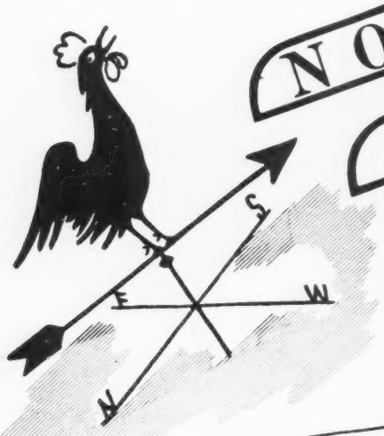








CHECK THESE FEATURES WITH THE MEN WHO USE THEM

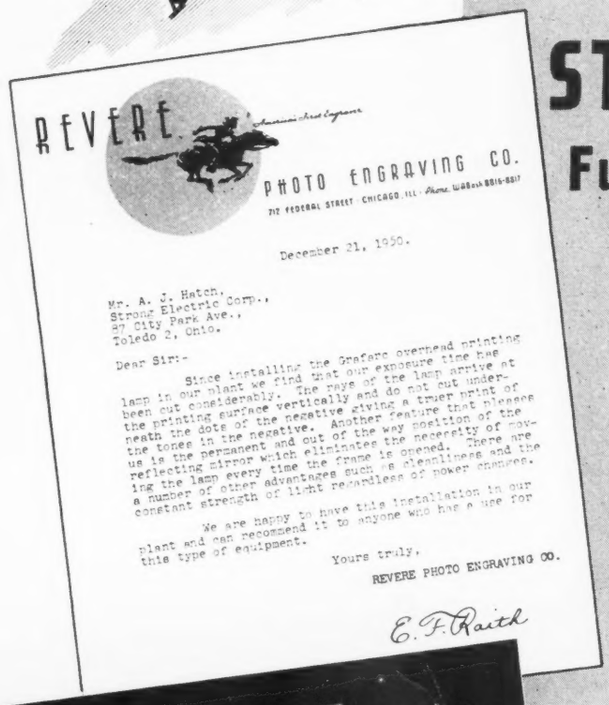


NORTH
SOUTH
EAST
WEST
EVERYWHERE

they're installing

STRONG GRAFARC

Fully Automatic High Intensity ARC LAMPS



Revere Photo Engraving Co.
717 Federal Street · Chicago, Ill. · Phone WAbash 8816-8817

December 21, 1950.

Mr. A. J. Hatch,
Strong Electric Corp.,
97 City Park Ave.,
Toledo 2, Ohio.

Dear Sir:-

Since installing the Grafarc overhead printing lamp in our plant we find that our exposure time has been cut considerably. The rays of the lamp arrive at the printing surface vertically and do not cut under-neath the dots of the negative. Another feature that pleases us is the permanent and out of the way position of the reflecting mirror which eliminates the necessity of moving the lamp every time the frame is opened. There are a number of other advantages such as cleanliness and the constant strength of light regardless of power changes.

We are happy to have this installation in our plant and can recommend it to anyone who has a use for this type of equipment.

Yours truly,
REVERE PHOTO ENGRAVING CO.

E. F. Raith

Installation of Strong Grafarc No. 32520 overhead printing lamp for horizontal frames at Revere Photo Engraving Company.

IN YOUR PLATE MAKING DEPARTMENT

- Cut exposure time in half
- Assure sharper dots
- Eliminate dot undercutting by crossover of reflected light rays

IN YOUR CAMERA GALLERY

- Uniform illumination on work of any size
- Extreme steadiness of light volume
- Constant color temperatures
- Eliminate illumination variable in accurate control of densities
- Power to punch through dense kodachromes

ON STEP AND REPEAT MACHINES

- Precise control of intensity for accurate repeats.

Approximately twice the light per arc watt results from the use of a silvered glass reflector, instead of a metal reflector. Models for all photo-mechanical reproduction processes. Adapters to fit most cameras and photo-composing machines. Present line supply wiring is usually adequate.

USE COUPON NOW!

THE STRONG ELECTRIC CORPORATION
307 CITY PARK AVENUE TOLEDO 2, OHIO

Please send free literature and prices.

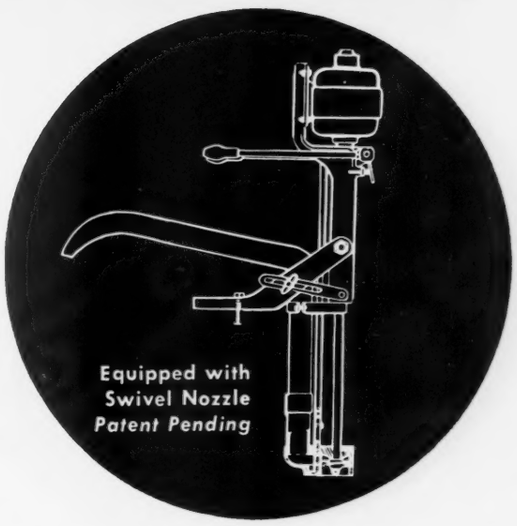
NAME_____
FIRM_____
STREET_____
CITY & STATE_____

INTERNATIONAL ELECTRO-PRESSURE

Automatic Metal Pump

Automatic Pouring

.....FOR CONTROLLED CASTING FLAT, TUBULAR, SEMI-CYLINDRICAL, STEREOTYPE PLATES



FEATURES

1. **Uniform Pressure delivery which may be regulated to suit.**
2. **Uniform speed of delivery, unchanged in its full travel from the pot to the box which pours the alloy in a solid steady ribbon-like flow that displaces the air properly.**
3. **Uniform and controlled alloy delivery eliminates the need for individual judgment and tolerances of time and temperature.**
4. **Swivel pipe nozzle and spout serving a multiple of casting units.**
5. **Direct draw from the main pot.**
6. **Proper agitation, insuring the balance of the alloy as intended.**

In addition to these features you are assured of utmost safety through the elimination of hazards encountered with hand casting operations and hand pouring methods. Saves you fuel, metal, effort and time up to 30% and 35%. Produces the smoothest cast surfaces and the densest cast today, in less time, less effort and less cost than is believed possible with any other casting method available.

USERS (additional names on request)

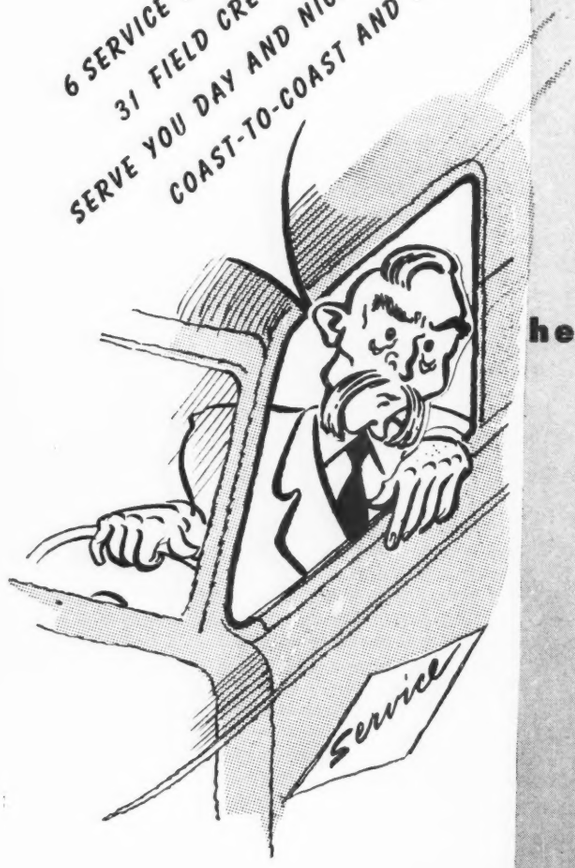
Chicago Herald American	*Flat & Double Page Casting*
Chicago Tribune	*Flat & Double Page Casting*
Milwaukee Journal	*Flat & Double Page Casting*
Flint (Mich.) Journal	*Ingot Feeder Pigs*
South Bend (Ind.) Tribune	*Shell Plate Casting*
New York News	*Flat Casting*
Crescent Engr. Co., (Kalamazoo)	*Non-stretch Jackets*
Chicago E & S Co.	*Backing Electro Shells*
Des Moines Register Tribune	*Flat Casting*
Ottawa (Ill.) Republican Times	*Tubular Plates*
N. E. Electro Co. (Boston)	*Non-stretch Jackets*
W. F. Hall Printing Co. (Chicago)	*Magazine Plates*
Los Angeles Examiner	*Flat Casting*
Peoria (Ill.) Newspapers	*Flat Casting*
Shaw Printing Co. (Dixon, Ill.)	*Tubular Plates*
Chronicle (DeKalb, Ill.)	*Tubular Plates*
Review-Atlas (Monmouth, Ill.)	*Semi-curved plates*
Journal-Standard (Freeport, Ill.)	*Tubular Plates*
Mail-O-Graph Co. (Kewanee, Ill.)	*Tubular Plates*
Journal (Providence)	*Flat Casting*
M. G. Lewis Co. (Jacksonville, Fla.)	*Flat Casting*
Art Color Printing Co. (Dunellen, N. J.)	*Magazine Plates*
Hartzell Mfg. Co. (Dayton, O.)	*Special*

INTERNATIONAL NEWSPAPER SUPPLY CORP.
134 N. LA SALLE ST.
CHICAGO 2, ILLINOIS

Visit our exhibit at the
A.N.P.A. Conference
Edgewater Beach Hotel, Chicago
June 10-13 • Booth 37

Uncle Mat Says...

6 SERVICE BRANCHES
31 FIELD CREWS TO
SERVE YOU DAY AND NIGHT
COAST-TO-COAST AND CANADA



MATRIX

CONTRAST SERVICE

prevents type slips

like this . .

he had the privilege also of viewing a number of rare Egyptian Mummies M

Machine operators sometimes "feel" certain errors such as wrong letters and transpositions. If the line in the assembler is easy to read, errors are easily detected and corrected before the lines are cast. In this way, the Matrix Method makes it possible to prevent fully one-third of all errors in original composition.

● Now with Matrix Contrast Colors (red, green, yellow, orange) "wrong font" errors also are quickly detected and positive selection of "pi" matrices is assured (at a glance.) Black and White or Colors are applied to all your matrices, old and new, at a very nominal yearly service charge by trained service crews from coast-to-coast and Canada. A call or letter to our nearest service branch will bring 'reasons why' you should use only the time-tested Matrix Method on your line-casting machines. Do it today!

MATRIX CONTRAST SERVICE

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154 West 14th Street, New York 11, N. Y.
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Program
ANPA Mechanical Conference

EDGEWATER BEACH HOTEL
CHICAGO, JUNE 11, 12, 13, 1951

THE importance of employee relations to newspaper production again dominates the annual Conference of the American Newspaper Publishers Association's mechanical meeting. Included in the program will also be discussions on the recent developments in the various newspaper production departments, in addition to thorough coverage of all major mechanical departments of the newspaper. The scheduled program is printed here for the benefit of newspaper production and mechanical executives who will be in attendance.

INDUSTRIAL RELATIONS

Monday, June 11, 10:00 A. M.

Chairmen: Shields Johnson, Roanoke (Va.) *Times* and *World-News*
John W. Park, Chicago *Tribune*

Welcome to Chicago
Basil L. Walters, Executive Editor, Chicago (Ill.) *News*

Opening Address
Leslie J. Griner, Chairman, ANPA Mechanical Committee

Annual Mechanical Report
Vernon R. Spitaleri, Manager, ANPA Mechanical Department

Modern Industrial Relations as Applied to Newspapers
Eugene C. Pulliam, President, Indianapolis (Ind.) *Star* and *News*

Personnel and Productivity
Dr. Robert K. Burns, University of Chicago

Monday, June 11, 2:00 P. M.

Chairmen: Edwin H. Evers, St. Louis (Mo.) *Globe-Democrat*
J. D. Raridan, Brush-Moore Newspapers, Canton, O.

(Continued on Next Page)

Exhibit Spaces
ANPA Mechanical Conference

AN interesting and educational display of the latest in newspaper equipment and supplies has been prepared by manufacturers and suppliers for the ANPA Mechanical Conference. All 87 exhibit spaces will be occupied by 51 firms to explain recent design improvements to interested newspaper production and mechanical executives. The exhibit will be located in the East and West Lounges and the Passaggio on the first floor of the Edgewater Beach Hotel. The exhibitors are as follows:

Alico, Incorporated
American Type Founders, Inc.
Bingham's, Sam'l, Son Mfg. Co.
Capital Tool & Mfg. Co.
Chemco Photoproducts Co., Inc.
Cheshire Mailing Machines, Inc.
Collmar Corporation
Consolidated Photoengravers & Lithographers Equipment Co.
Craftint Mfg. Co.
Eastern Graphic Arts Supply Co.
Fairchild Camera & Instrument Corp.
Federated Metals Div.
Gaebel, Arthur H., Inc.
General Electric Co.
General Plate Makers Supply Co.
Hammond Machinery Builders, Inc.
Imperial Type Metal Co.
International Newspaper Supply
Kemp, C. M., Mfg. Co.
Korfund, Co., Inc.
Lake Shore Electrotype Div.
Linotape Products Co.
Linotype Parts Co., Inc.
Ludlow Typograph Co.
Matrix Contrast Corp.
Minnesota Mining & Mfg. Co.
Mohr Lino-Saw Co.
Monomelt Co., Inc.
Morrison Co., The
National Bundle Tyer Co.
National Lead Co.
National Steel and Copper Plate Co.
Nolan Corporation
Precision Engineering Co.
Printing Equipment Engineer
Richards, J. A., Co.
Robertson, R. R., Co.
Rolled Plate Metal Co.
Rouse, H. B., & Co.
Sta-Hi Corp.
Stereotex Machinery Co.
Strong Electric Corp.
Teaneck Chemical Co., Inc.
Teletypesetter Corporation
Tingue, Brown & Co.
Vandercook and Sons, Inc.
Vulcan Rubber Products, Inc.
Walton Laboratories
Wesel Mfg. Co.
Wiretyer Company
Wood Newspaper Machinery Corp.

The Grapevine Hangs the Foreman
Robert H. Spahn, Oklahoma City (Okla.) *Oklahoman* and *Times*

Techniques of Supervision
Charles LeBlanc, Research Institute of America, New York

Sabotage Control in the Newspaper Plant
Lenox Lohr, Director of Civil Defense, State of Illinois

COMPOSING ROOM

Tuesday, June 12, 9:00 A. M.

Chairmen: Stephen J. Lambert, Brooklyn (N.Y.) *Eagle*
Fred Gross, San Francisco *Chronicle*
B. F. Garrity, Gannett Newspapers, Rochester, N. Y.

Techniques of Composing Room Layout
A. E. Rosene, Production Mgr., St. Paul (Minn.) *Dispatch* and *Pioneer Press*

Teletypesetter Panel
D. P. Miller, Vice Pres., Allentown (Pa.) *Call-Chronicle*
Mergenthaler Linotype Co.
Intertype Corporation
Teletypesetter Corporation

Control of Dispatch Department
Harry Eybers, Production Mgr., Washington (D.C.) *Post*

Composing Room Operation
Discussion led by John Barron, Composing Room Supt., LaSalle (Ill.) *Tribune*

PRESSROOM

Tuesday, June 12, 2:00 P. M.

Chairmen: Joseph E. McMullen, Milwaukee (Wis.) *Journal*
Earl R. Weiskittel, Youngstown (O.) *Vindicator*
W. Watson Southam, The Southam Co., Ltd., Montreal, Canada

Improvements in Press Drives
General Electric
Cline-Westinghouse
Cutler-Hammer

Electro-Tab Autopaster
I. Tornberg, Wood Newspaper Machinery Corp.

New Tension Lock-Up Developments
Goss Printing Press Co.

Pressroom Operation
Discussion led by Frank Dassori, Pressroom Supt., Detroit (Mich.) *Times*

ADVERTISING

Tuesday, June 12, 8:00 P. M.

Chairmen: Harry Eybers, Washington (D.C.) *Post*
F. Richard Lilly, Miami (Fla.) *Herald*

ANPA-AAAA Joint Committee Report
Color Comics, Erwin Miessler, Needham, Louis & Brorby, Inc., Chicago
Rotogravure, Ben Dalgin, Director of Art and Reproduction, New York *Times*

Effective Use of ROP Color in Advertising
E. Thomas McBreen, J. Walter Thompson Co., Chicago

General Discussion

ENGRAVING

Three Color ROP
Joseph E. McMullen, Assistant Production Mgr., Milwaukee (Wis.) *Journal*

Engraving Problems
Discussion led by Burt Mader, Engraving Supt., Boston *Christian Science Monitor*

STEREOTYPING

Wednesday, June 13, 9:00 A. M.

Chairmen: Charles R. McGuire, Minneapolis (Minn.) *Star* and *Tribune*
Leven T. Deputy, Dallas (Tex.) *News*

ANPA Research
C. M. Flint, ANPA Research Director

Stereotype Problems
Discussion led by L. H. Conley, Stereotype Supt., New York *World-Telegram* and *Sun*

MAILROOM

Wednesday, June 13, 2:00 P. M.

Chairmen: W. E. Gibbons, Chicago *Herald-American*
Reg Tranter, Boston *Herald-Traveler*

Modern Mailroom Methods (Movie)
H. Earle Runion, Production Engineers, Louisville, Kentucky

New Wire-Tying Machine
W. H. Hayford, Wiretyer Corporation, Paterson, N. J.

Dexter Stuffing Machine (Movie)
Peter DeFlorez, DeFlorez Company, New York

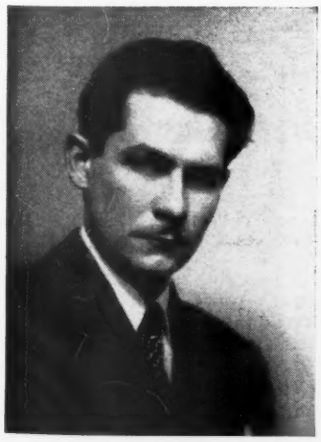
NEWSPRINT HANDLING

Man Saver Grab For Handling Newsprint
J. Breslav, Man Saver Industries, Inc., New Haven, Conn.

Newsprint Handling at Milwaukee Journal (Movie)

ANPA Mechanical Committee and Research Executives

LESLIE J. GRINER, Production Manager of the Detroit *News*, is Chairman of the American Newspaper Publishers Mechanical Committee. His career in the newspaper printing industry dates back to 1924 and has pioneered in many phases of newspaper printing.



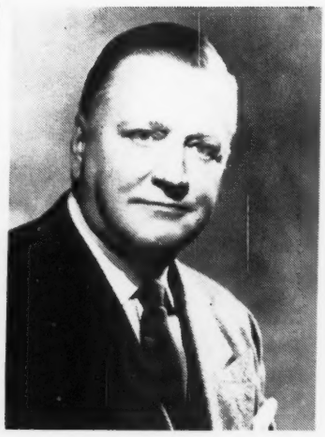
VERNON R. SPITALERI, Manager of the ANPA Mechanical Dept., has served in this capacity since 1949. A frequent visitor at various newspaper mechanical conferences throughout the country.

C. M. FLINT, ANPA Research Director, will report on ANPA research progress at the Chicago mechanical conference. His discussion of the stereotype plastic molding blanket will interest newspaper executives.

WILLIAM BAUMRUCKER, jr., is Chairman of the ANPA Mechanical Research Committee and Production Manager of the Washington (D.C.) *Times-Herald*.

JOHN L. BLAKE, a member of the Mechanical Committee for several years, is associated with Scripps - Howard Newspapers, New York.

LEVEN T. DEPUTY joined the Committee last year. He is Mechanical Supt. and a Director of the Dallas (Tex.) *Morning News*.



EDWIN H. EVERS served as last year's chairman of the Mechanical Committee and is Production Mgr. of the St. Louis *Globe-Democrat*.

HARRY EYBERS, recently appointed Production Mgr. of the Washington (D.C.) *Post*. He formerly was with the Salt Lake City *Tribune* and *Telegram*.

B. F. GARRITY is Production Manager of Gannett Newspapers, Rochester, N. Y. He is one of the Chairmen for this year's composing room session.

W. E. GIBBONS, Production Manager, Chicago *Herald-American*. A pioneer in four-color newspaper printing.

FRED GROSS, a new member on this year's Committee, is Mechanical Supt. of the San Francisco *Chronicle*.

SHIELDS JOHNSON is with the Roanoke (Va.) *Times* and *World News* as General Manager. He was a new member to the Committee last year.

STEPHEN J. LAMBERT, Mechanical Supt. of the Brooklyn (N.Y.) *Eagle*. He is a past president of the New York Club of Printing House Craftsmen.

F. RICHARD LILLY is Engraving Dept. Supt. of the Miami (Fla.) *Herald*. His greatest interest is in magnesium engraving.

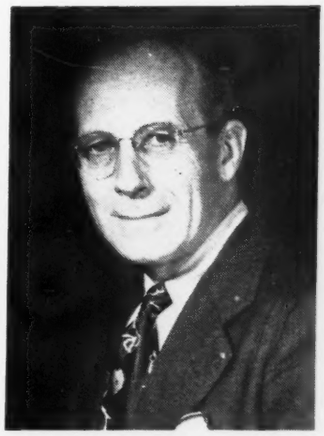
CHARLES R. McGUIRE, a newcomer to the Mechanical Committee, is associated with the Minneapolis *Star* and *Tribune* as Mechanical Supt.

JOSEPH E. McMULLEN, Assistant Production Mgr., Milwaukee *Journal*. A new addition to the group, he enjoys working with the Mechanical Committee.

JOHN W. PARK, an original member of the Committee since 1928, is Production Manager of the Chicago *Tribune* and a past chairman of the Committee.

J. D. RARIDAN has nearly a half century of experience in newspaper printing. He is Executive Editor of Brush - Moore Newspapers, Inc., Canton, O.

W. WATSON SOUTHAM, a Director and Production Manager for The Southam Co., Ltd., Montreal, Can. He will preside at the pressroom clinic.



REG TRANTER joined the ANPA Mechanical Committee this year. He is associated with the Boston *Herald-Traveler* as Production Mgr.

EARL R. WEISKITTEL is a presiding officer at the pressroom session. He is Pressroom Supt. of the Youngstown (O.) *Vindicator*.

Biographies of New ANPA Committee Members

Printing Equipment Engineer once again is publishing miniature biographies of new members of the ANPA Mechanical Committee. This custom is carried out annually to acquaint readers with those executives appointed since the previous year's mechanical conference. Members of the committee who served last year, are well known to the mechanical and production executives of the newspaper printing industry.

FRED E. GROSS has been associated with the San Francisco (Calif.) *Chronicle* for the past 16 years where at present he serves as Mechanical Superintendent. A hard-working executive, he was appointed composing room foreman of the *Chronicle* at the age of 22. His previous associations in the industry have included several years' work on the Fresno (Calif.) *Bee*, San Francisco *Shopping News* and the California State Printing Office. Gross' initial work in the newspaper printing industry has centered around the technical application of color inks. The stereotype department, however, occupies his greatest interest. He includes playing the piano among his hobbies and has attended Fresno State College.

CHARLES R. McGUIRE holds the title of Mechanical Superintendent at the Minneapolis (Minn.) *Star* and *Tribune*. McGuire started his newspaper career as an apprentice stereotyper with the Duluth (Minn.) *News Tribune* in 1916. He transferred to the Duluth *Herald* in 1918 where he finished his apprenticeship and worked as a journeyman stereotyper until 1936, the last two years as foreman. He left Duluth to become stereotype foreman of the Des Moines (Ia.) *Register*. In 1940, McGuire became associated with the *Star* and *Tribune* as stereotype superintendent, was appointed assistant mechanical superintendent in 1945 and to his present position in 1948. He is also a past president and director of the Northwest Newspaper Mechanical Conference and enjoys hunting and golf in his spare time. His is a modest personality.

JOSEPH E. McMULLEN, Assistant Production Manager of the Milwaukee (Wis.) *Journal*, is well known to the mechanical end of the newspaper industry through his participation in the development of ROP color at the *Journal*. He has been associated with that newspaper for 11 years. McMullen got his start in the trade at the Dubuque (Ia.) *Times Journal*

(*Continued on Page 109*)

R&EC

Executive Committee Holds Busy Session

AT A special meeting of the Executive Committee of the Research and Engineering Council, Inc., held in Cleveland on May 18, it was decided to postpone the usual annual June Council meeting until late in the fall. The place and date of the meeting will be announced by Council President Frank F. Pfeiffer.

Publication of four units to complete the second volume of the Council's *Research and Operation Manual* will be issued and all subscribers will receive them.

The general report of the Publications Committee was received and approved.

John Davis, jr., Judd & Detweiler, Washington, D. C., was selected Acting Vice President to succeed E. R. Duffie, Meredith Pub. Co., Des Moines, who resigned to accept another position.

To serve as Council Treasurer, Joseph Schwartz of Westcott & Thomson, Philadelphia, was selected.

Future operations of the Council with reference to financing the Council were re-examined, and committees were appointed to provide ways and means of attaining Council objectives.

The following Committees were appointed:

Finance—Chairman, Edward J. Triebe, Vice President, Kingsport Press, Kingsport, Tenn.; Thomas Beck, Beck Engraving Co., Philadelphia; Joseph Chanko, General Mgr., Conde' Nast Press, Greenwich, Conn.; John Davis, jr., Judd & Detweiler, Washington, D.C.; Elliott Donnelley, R. R. Donnelley & Sons Co., Chicago; Joseph Schwartz, Westcott & Thomson, Philadelphia; C. Howard Thomas, National Pub. Co., Inc., Philadelphia.

Committee in Kind—Chairman, W. J. Burgard, J. W. Clement Co., Buffalo, N. Y.; Wade E. Griswold, Executive Director, Lithographic Technical Foundation, New York, N. Y.; Ralph B. Tufts, Rochester Institute of Technology, Rochester, N. Y.

Committee on Long Range Support—Chairman, C. Howard Thomas, National Pub. Co., Inc., Philadelphia; James R. Brackett, Printing Industry of America, Inc., Washington, D. C.; Wade E. Griswold, Executive Director, Lithographic Technical Foundation, New York, N. Y.; Herbert B. Livesay, National Assoc. of Printing Ink Makers, New York, N. Y.; Frank F. Pfeiffer, Vice President, Reynolds & Reynolds Co., Dayton, O.; Joseph Schwartz, Westcott & Thomson, Philadelphia.

For Study of Publications Committee Income—Chairman, Bernard Snyder, American Typesetting Corp., Chicago; Wade E. Griswold, Executive Director, Lithographic Technical Foundation, New York, N. Y.; Leo Joachim, Colton Press, New York, N. Y.; Frank B. Myrick, Editor, *Bookbinding & Book Production*, New York, N. Y.; Albert P. Schloegel, Executive Secretary, Intl. Assoc. of Electrotypers & Stereotypers, Inc., Cleveland; MacD. Sinclair, Editor, *Printing Equipment Engineer*, Cleveland; Bernard J. Taymans, Asst. General Mgr., Printing Industry of America, Washington, D. C.; Ernest F. Trotter, Editor, *Printing*, New York, N. Y.

PIA Specifications for Engraving & Color Adopted by Conde' Nast

A DEFINITE example of the implementation of an important industry objective occurred recently when The Conde' Nast Press, Greenwich, Conn., announced to all parties concerned its desire to adopt the PIA Photoengraving Specifications Manual and the PIA Recommended Process Colors for publications printed by that firm.

In proposing the adoption of the PIA engraving specifications and process colors, General Mgr. Joseph Chanko stated: "Although there is only a slight difference between these colors and the Conde' Nast process colors which we have specified in the past, our test runs indicate that there is an improvement in quality, and in the interest of establishing a standard throughout the engraving and printing industries for magazines such as ours, we are adopting these new process colors."

The Conde' Nast Press produces a number of nationally known publications, among which are *Brides Magazine*, *Farm Quarterly*, *Vogue*, *House & Garden*, *Modern Photography*, *Nation's Business*, *New Yorker*, *Scientific American*, *Glamour* and *Vogue Pattern Book*.

The procedure followed in implementing the PIA photoengraving specifications and PIA process colors was in this order: The Conde' Nast Press wrote to its customers. A copy of the PIA Manual was enclosed. In the letter it was explained that Conde' Nast was adopting the PIA specifications and process colors. The recipient's approval was asked. Also, a request was made that the publisher inform Standard Rate & Data service of the change. It was suggested that a letter be sent to all advertising agencies. All photoengravers concerned were informed of the changes and were asked to request a supply of new inks and new paper from The Conde' Nast Press.

During the summer 1951 issues of all magazines produced by Conde' Nast, the effective date is to be specified by each publication.

Conde' Nast supplies engravers with proofing stock in packages; this stock is identical with the paper stock used in the particular magazine for which the engravings are being made. Also, cans of proofing inks are supplied the engraver.

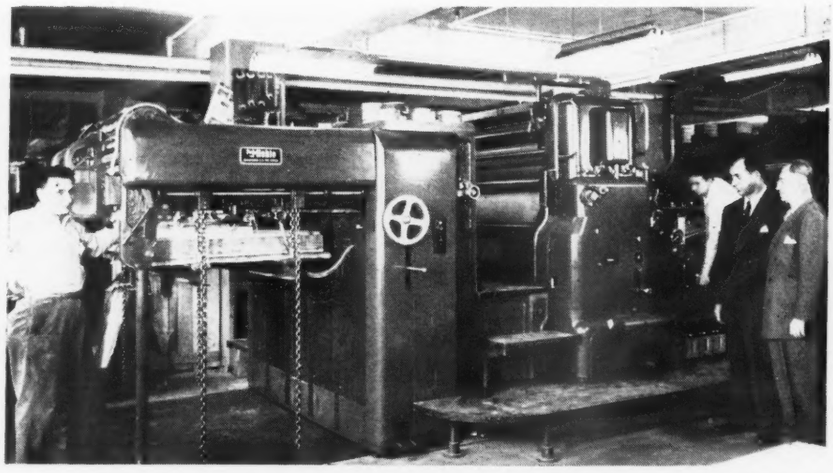
In each package of proofing sheets two Color Control Sheets are supplied. These Color Control Sheets are also available to all people concerned. The sheets are cut from the paper which is to be used in printing a particular magazine.

A specially prepared folder, 8½ in. by 11 in. size, has been prepared. The process color control sheets in the folder are labeled with index tabs to indicate the paper used for inserts and/or covers in each magazine. Color bars appear on each sheet. These are in the following printing progression order: red, black, yellow and blue. The upper band of the colors bars are solid and the lower portion is 70% screen. Instructions are given the engraver to run color bars the full width of the engravings and parallel to the ink rollers. Thus the engraver can place the color bars on his proof in the space provided on the proof paper.

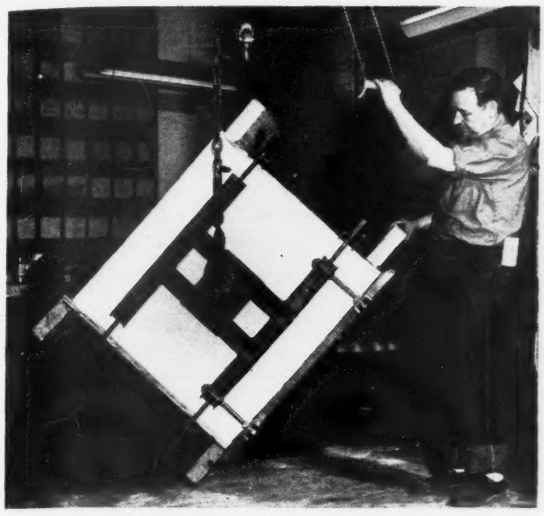
In letters sent to interested people, it was stated that questions about the move would be welcomed by The Conde' Nast Press.

Mr. Chanko also stated there has been considerable enthusiasm about the new process colors. He concluded: "We hope that in the not too far distant future there will be unanimity on process colors for the letterpress field."

If you can't find the source of supply, ask *Printing Equipment Engineer*.



Installs Miehle Offset Press—Samuel Weinress and Wallace Weinress of American Printers & Stationers, Inc., Chicago, are shown above at right viewing the company's recently installed Miehle No. 61 Single Color Offset Press. The firm recently moved to larger quarters which has more than tripled its plant area.



Pressroom Supt. Orie Smith of the Columbus Bank Note Co., Columbus, O., is shown here using the RollAskid Paper Turner to turn over a pile of paper which has been printed one side and is to be backed up on the press on the other side. The device was developed by Supt. Phil Jenkins.

One man can perform the operation. A standard type hoist affixed to the ceiling furnishes the lifting power. The pile is easily rotated through a 180 deg. arc of a circle after being lifted by the hoist approx. 6 in. from the floor.

RollAskid Paper Turner

THE RollAskid Paper Turner is designed so that one operator can quickly turn over a skid of sheets printed one side preparatory to backing up the other side on the press. As will be obvious, the device eliminates flopping many lifts by hand as has been the custom in some printing plant pressrooms. The device was developed by Philip Jenkins, Vice President and Superintendent of the Columbus (O.) Bank Note Co., and will be manufactured and distributed by The M. L. Abrams Co.

Essentially, the RollAskid Paper Turner consists of sectionally adjustable channeled steel frames which, when fastened in position about the pile of paper sheets at the delivery end of the press permits transporting the pile on a floor truck to a hoist where the pile may be rotated through an arc of 180 deg., right side up, for transport by hand truck to the feeder end of the press ready to be backed up.

When preparing to invert a pile of paper, two channel steel lengths are placed horizontally beneath the skid supporting the paper pile and another skid is placed in inverted position on top of the pile. Two of the channeled steel lengths are now placed horizontally on top of the pile between the skid runners; the slotted ends of the four lengths project outwardly from the paper pile.

Next, two H frames (one of which is shown in the illustration) are placed one at either side of the pile with the four screws inserted in the slots of the projecting channeled lengths described above. The large size hexagon nuts are now turned up to provide a rigid package. It is stated that while a wrench may be used to turn up the hexagon nuts, in many cases turning up the nuts by hand will provide a rigid enough frame for the turn-over operation.

Next, two channel sections of the frame are placed in position on one side elevation of the paper pile to prevent possible sliding of the pile on the lower side during the turnover.

A skid lift truck is now slid under the pile. The pile is conveyed to a point underneath a standard type electric hoist affixed at a convenient location in the pressroom ceiling. At this time, the operator manipulates the hoist pendant switch to bring a swiveled I beam over the trussed-up pile. The short lengths of chain attached to each end of the I beam are hooked over the centered swivel bearing in the H frame—one at either side of the pile. The hoist is now operated until the pile has been lifted about 6 in. from the floor.

The operator can easily rotate the suspended pile through the 180 deg. arc of a circle after which the inverted pile is again deposited upon the floor.

The various parts of the RollAskid are removed from the pile. The lift truck is pushed under the bottom skid and the pile is transported to the delivery end of the press.

The skid hoisting mechanism may be placed adjacent to a press or in a convenient fixed position to a number of presses. The hoisting element is a standard type of electric chain hoist fixed permanently in the ceiling.

Sponsor states that in contrast with the usual hand-lift flopping of one-side-printed press sheets, inverting a skid-load of paper with the RollAskid, there is little or no danger of offset, smear or smut on the unprinted side of the sheet. The reason is that no sliding or frictional movement of the sheets takes place during the inverting operation.

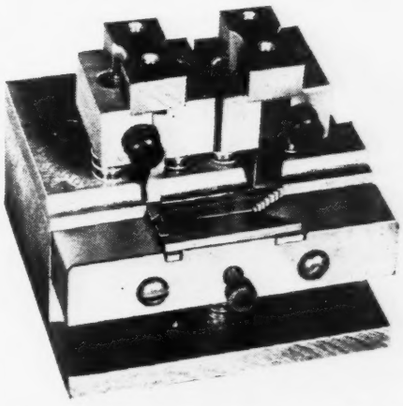
The RollAskid will be furnished in three capacities with which any area sheet within the capacities may be handled. The sheet sizes extend from 22 in. by 34 in. up to 44 in. by 72 in.

Mr. Jenkins states that in one instance at the Columbus Bank Note Co., 90 thousand sheets of 34 in. by 45 in. 70 lb. paper on 10 skids were inverted in 4 hr. He also explained the capabilities of the RollAskid by stating that on a press printing a 35 in. by 45 in. sheet, after a 3 hr. run, the paper pile at the delivery end of the press might weigh 1800 to 2000 lbs. Including the rigging of the pile, transporting the skid from the delivery end of the press, to the inverter and back to the feeder position of the press, the average time consumed for the operation is of the order of 7 min.

For further information, please mention PEE No. 97 in your request.

Matrix Alignment Restored with Align-A-Mat

AVAILABLE from Fisk Industries is the Align-A-Mat, developed by Sol Cantor. This substantial tool is designed for restoring correct alignment points on line-composing machine matrix lugs after the lugs have become worn through normal use. The Align-A-Mat is provided with precisely ground openings in a die plate in which upper front and back and lower front and back matrix lugs to be repaired are inserted. After a matrix has been placed in the die, a jack holding a specially shaped and ground punch is struck with an 8 oz. hammer. When the punch strikes the matrix lug it exerts a swaging action on the lug stock so that the lug is restored to its original size with respect to alignment. All matrix lugs may be swaged in this tool to restore alignment.



View of Align-O-Mat (in greatly reduced size) which is a tool for swaging worn line-composing machine matrix lugs to restore them to original letter character alignment.

It is well known that the lower back and front matrix lugs are susceptible to the greatest wear. The roman position alignment is accomplished by the lower edge of the upper front lug and the upper edge of the lower lug on the casting face of the matrix. The alignment of the auxiliary position of two-letter matrices is provided by the lower edge of the lower front matrix lug and the upper edge of the lower back matrix lug. When mixed italic or bold face and roman matrix positions are used in a line, the matrices in auxiliary position really are the first to show misalignment because of wear of the underside of the lower front matrix lug. Matrix lug wear is especially noticeable when new sorts matrices are mixed indiscriminately in a used font.

The following matrix lug dimensions for new matrices are given by Fisk Industries as follows: Lower lugs, 0.125 in., with 0.001 in. plus or minus allowed; upper lugs should measure 0.265 in. to 0.267 in., as Intertype and Linotype matrices vary somewhat at this point

The upper lug on the casting side is not important for aligning purposes but it is advisable to keep its dimensions near 0.265 in.

Fisk Industries advises that the Align-A-Mat may be used as follows: Usually, lug repair is required for the most used lower case letters and a few small capitals. It is recommended that when a font shows misalignment, the matrices should be run out of the magazine letter by letter—e, t, a, o, etc. Measure one or two matrices of each character with a micrometer to see how far the lower lug (casting side) is off the standard measure of 0.125 in. The more the lug is worn the harder the jack holding the small punch in the swaging tool will have to be struck to expand the lug to original dimension.

In addition to providing a means for correcting alignment on all matrices up to 14 pt., an adjustment of a platform allows the tool to be used for restoring alignment on 18 pt., 24 pt., and larger type face matrices.

If you wish further information regarding the Align-O-Mat please mention PEE No. 101 in your request.

Fire Extinguisher Guide

A GENERAL line folder, covering portable and special purpose fire extinguishers, has just been published by Stop-Fire, Inc. A chart provides a guide for selecting extinguishers for every type of fire hazard in industry, institutions and the transportation field. Sponsor states chlorobromomethane and all standard approved extinguishing agents are used to this line of equipment. Please mention PEE No. 100 in your request for further information.

Gravure Research Meets

THE fourth annual meeting of Gravure Research, Inc., was held at the Fort Hayes Hotel in Columbus, O., on May 15. Seventeen of the 18 member companies were represented by the attendance of 28 persons.

Progress in the research program on the sensitizing of carbon tissue, the composition of the ferric chloride used for etching, the etching operations, and the effect of doctor-blade oscillation on the printed image was reported by representatives of Battelle Memorial Institute. The present research contract with Battelle will be continued until November, 1952. The group decided to concentrate the research efforts during the coming year on the processing of carbon tissue and the etching operations.

M. J. Tiernan, Art Gravure Corporation of Ohio, Cleveland, was elected President for the coming year. Other officers elected were: First Vice President—Robert Simpson, C. T. Dearing Co., Louisville, Ky.; Second Vice President—George A. Preucil, Chicago Rotoprint Co., Chicago, and Secretary-Treasurer—T. J. Stulz, Parade Publications, Inc., New York. Directors are: W. Isom, R. R. Donnelley and Sons Co., Chicago; Oscar Smiel, Intaglio Service, Inc., New York; James V. Noel, Detroit Gravure Corp., Detroit; J. Molitor, Art Color Printing Co., Dunellen, N. J., and C. J. Murray, Triangle Publications, Inc., Philadelphia. J. Homer Winkler, Battelle Memorial Institute, Columbus, was elected Assistant Secretary.

The Technical Advisory Committee of Gravure Research, Inc., met for the entire day preceding the annual meeting at the Graphic Arts Research Division Laboratories of Battelle. A detailed appraisal of research results was made. The Committee recommended the publication of a manual on the processing of carbon tissue as quickly as the results of the experimental work and plant tests permitted. Matt Romano, of Triangle Publications, Inc., Philadelphia, was elected Chairman of the Committee for the coming year. This Committee meets quarterly at Battelle.

TAGA Replaces TALI

Technical Association of Graphic Arts open for membership to Technical Men on an industry-wide basis.

ONE of the items of great interest (so far as technical side of the entire printing industry is concerned) is that the Technical Association of the Lithographic Industry is now known as the Technical Association of the Graphic Arts. This change in complexion took place after adjournment of the TALI meeting in Columbus, O., on May 7, 8 and 9. Membership in TAGA is now open to all technical men on an industry-wide basis in the entire Graphic Arts Industry.

Approx. 160 persons attended the meeting, arrangements for which were carried out by J. Homer Winkler and his local committee.

There were 13 papers presented. Those of particular interest were: *Corrosion Considerations*, by Prof. M. L. Fontana, Ohio State University; *Electrolytic Etching of Copper Photoengravings*, by L. B. Vasler, Battelle Memorial Institute; *Aspects of Vision as it Relates to Art Copy*, by Prof. H L. Sherman, Ohio State University; *Pressroom Illumination*, by P. E. Tobias, Edward Sterm & Co., Philadelphia; and *Static Electricity in Printing*, by L. E. Walkup of Battelle Memorial Institute, Columbus, O.

The proceedings of the conference, it is announced, will be published about the middle part of July.

Two other scheduled addresses, although of entirely different nature, were well received. The first of these was a luncheon address by Robert Kelley of The Columbus Bank Note Co. on *Typographic Preferences*. Highly humorous and very contrasty with respect to the types existing today, the address provided diverting entertainment.

Louis Bromfield, nationally known conservationist and farmer, discussed how forest conservation will affect future paper supplies; and he also talked on national economic considerations. His statements regarding restoration of natural resources by widely interested elements of our population is highly encouraging. Bromfield's address topped the non-technical features of the meeting.

On the last day of the meeting, a tour of Battelle Memorial Institute was made by 60 members of TAGA. The technical men toured the entire Institute in addition to the Graphic Arts Research Div. A luncheon was served at Presutti's following the tour.

Another unscheduled feature was the visitation of about 30 of the technical men to the Visual Perception Laboratory, School of Fine and Applied Arts, Ohio State University, on Wednesday afternoon, May 9. At this time, Prof. Hoyt L. Sherman lectured to about 30 of the TAGA group. Many demonstrations were made in this visual center. Following Professor Sherman's address on Monday, it was decided to appoint a committee to determine the possible application of visual perception techniques and training to the creation of copy and printing production.

Alex Murray of Eastman Kodak Co. received the TAGA Recognition Award for the year for his contributions to the Graphic Arts.

Dr. Marvin Rogers discussed the state of membership and mentioned that in those centers where it is possible to do so, Graphic Arts technical men can get together for monthly meetings to discuss subjects of mutual interest.

First Vice Pres. John McMaster (Eastman Kodak Co.) will handle membership activities. As has been stated above, membership is open in TAGA to technical men in all phases of the Graphic Arts industry.

Officers Elected

Officers elected to serve the Technical Association of the Graphic Arts (TAGA) are as follows:

President—Paul W. Dorst, Lithographic Consultant, Cincinnati, O.

First Vice President—John McMaster, Manager, Graphic Arts Div., Eastman Kodak Co., Rochester, N. Y.

Second Vice President—Frank Preucil, Chicago Rotoprint Co.

Secretary-Treasurer—Paul J. Hartsuch, Intl. Printing Ink Div. of Interchemical Corp., Chicago.

Directors—Immediate Past President Marvin C. Rogers, R. R. Donnelley & Sons Co., Chicago; Dr. Roland M. Schaffert, Battelle Memorial Institute, Columbus, O., and Frank A. Myers, Treasurer of Copifyer Lithograph Corp., Cleveland.

An invitation was extended on behalf of the City of Cleveland for the next convention, the hotel and definite dates to be determined later by the official board of the association.

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

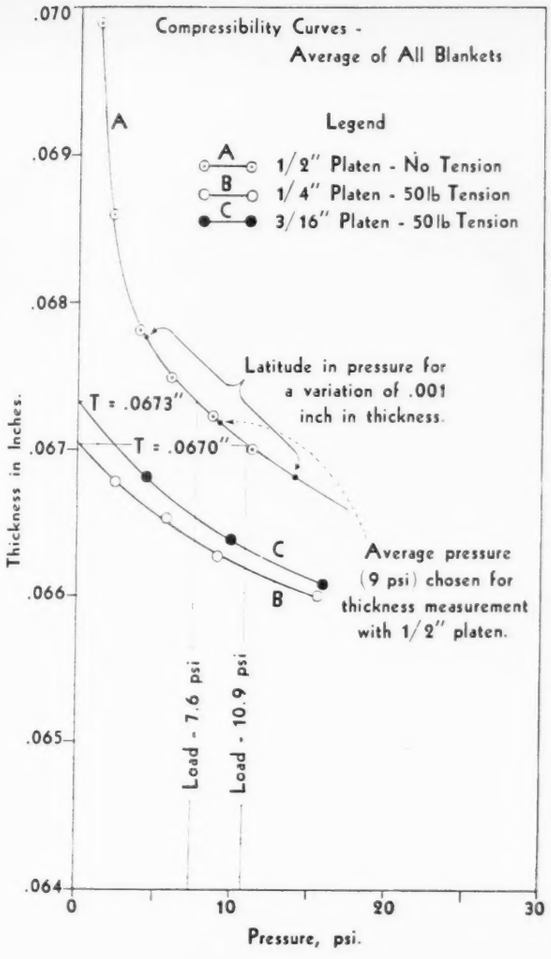


Fig. 1.—Here are shown compressibility curves for 13 blankets (average of all blankets) tested from various manufacturers on the LTF offset blanket thickness gauge. Three diameters of platens were used in the instrument and the curve for each tells the story. Measurements will be alike with this instrument if different operators are taking like measurements.

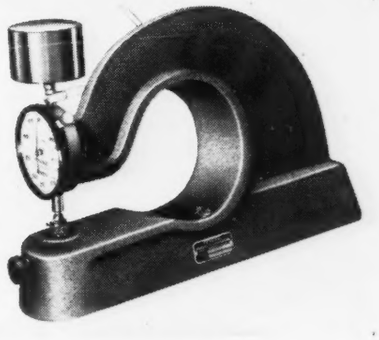


Fig. 2.

Offset Blanket Thickness Gauge

By ROBERT F. REED* and WALTER J. BUBLITZ*

Lithographic Technical Foundation.

AS EVERY good offset pressman knows, quality printing requires true cylinders, accurate packing of plate and blanket, and correct cylinder pressures. Attainment of these conditions is not easy, however, because the cylinders are not always true, packing sheets are not uniformly thick, and both plates and blankets vary as much as 0.002 in. in thickness. Yet good printing requires that there be a uniform squeeze pressure between the plate and blanket of 0.003 in. to 0.004 in.

The only means most pressmen have for gauging the thickness of packing, plate and blanket is a machinist's micrometer. This is a very good instrument for metal and other noncompressible materials but it is unsatisfactory for rubber blankets for three reasons: (1) The blanket is compressible and its measured thickness varies with the pressure applied to it by the contact point; (2) The area of the contact point is usually too small to cover a representative area of the blanket, and (3) There is no way to standardize the pressure at which the thickness reading is taken. For these reasons measurement of blanket thickness is too much dependent upon the human element. Different operators seldom obtain the same thickness reading on the same blanket. Even the same operator does not always apply the same pressure. A ratchet helps as long as the same micrometer is used, but no two ratchet micrometers are alike.

From time to time, blanket manufacturers and suppliers receive complaints that their blankets vary in thickness. The variations may be between different areas of the same blanket, or between different blankets of the same make, often cut from the same roll. Many times these variations cannot be checked, and lead to controversy. All this means that a more accurate method of measuring blanket thickness is needed—one that gives the same results regardless of the operator.

In view of this need, LTF, with the cooperation of all the domestic blanket manufacturers, undertook and completed a study of blanket thickness measurement. It has proposed a special thickness gauge built to the specifications which resulted from this study. The recommended gauge is similar to bench micrometers used for many years by blanket makers and some lithographers. It differs from these principally in its larger contact point area and its predetermined standardized pressure.

To arrive at the optimum area and pressure, measurements were made on 13 different commercial offset blankets with three different sizes of contact points, at pressures ranging from 0.6 to 80 lbs. per sq. in. Measurements were taken both without tension on the blanket and with a tension of 50 lbs. per in. of width on

(*Continued on Page 110*)

EDITOR'S NOTE:

In this article is described an offset blanket thickness gauge developed by Lithographic Technical Foundation. Printing Equipment Engineer *has not been informed as to whether this gauge or some modification of it can be applied to the measurement of newspaper press blankets. However, at a fairly recent Great Lakes Mechanical Conference meeting, newspaper executives expressed a desire for the adoption of a standard by which blankets could be measured. Up to the moment, it appears that nothing was accomplished. Granted that the vagaries of the stereotype plate might make the problem somewhat more complicated, yet at the same time we believe superintendents and pressroom executives should be provided a tool which will help them in their increasing quest for accuracy and standardization of their equipment and methods. The ANPA Research Dept.'s major activity has been in the refinement of the stereotyping process. We hope the ANPA Research Dept. will take on the study of applicability of the LTF gauge to newspaper press blankets.*

We are informed that deliveries of the Blanket Thickness Gauge will begin in July by the Federal Products Corp. A technical bulletin describing the device will be distributed by the Foundation early in the summer. In addition to being easy to use, new Blanket Thickness Gauge enables the operator to accurately determine thickness of the blanket while under tension. The instrument is designed so it can be used to measure any part of the blanket.

The gauge is also suitable for measuring the thickness of packing sheets, printing papers, foils and other flexible materials. With proper care, we are informed it can be used to measure the thickness of printing plates.

One of the Matrix Contrast service trucks (this one in the Southern territory) which some of the 31 crews use to process matrices in customers' plants—day or night.

The Story About Matrix Contrast Corp. and Its New Plant

OVER 30 years ago Matrix Contrast Corp. was founded for the purpose of improving the legibility or visibility of reference marks on line-casting machine matrices. During the ensuing period, Matrix Contrast Corp. has improved the process itself and, just as important, has improved the method of servicing its customers.

The occasion for telling you something about Matrix Contrast Corp. in this article is that the company recently combined its New York offices and processing plant under one roof at 154 West 14th St.

As all users know, reference marks on matrices are furnished by the manufacturers in black on a brass surface. When the matrices are new, these black-on-brass reference marks have a fair degree of visibility. Unfortunately, the brass matrices become tarnished and more or less dirty with use. Consequently, there is a resultant loss of contrast between the reference marks and the brass. This condition makes it difficult for the composing machine operator to recognize the reference character quickly.

The difference in visibility has been scientifically measured at the General Electric Co.'s Lighting Research Laboratory. Tests were made of Black and White processed matrices, new non-processed matrices, and used non-processed matrices. Using the Luckiesh-Moss Visibility Meter, it was found that Black and White processed matrices have a relative visibility of 4.65; new non-processed matrices 2.70; and used non-processed matrices 1.10. Or, to compare their relative visibilities in terms of type sizes, Black and White processed matrices have a visibility equivalent to 9 pt. type while used non-processed matrices are equivalent to 3 pt. type in legibility. This visibility is the equivalent of 3:1.

Over a long period of time the company has claimed that in actual day-to-day machine operation, this increased visibility produced by Matrix Contrast Service means an average saving of 33% of all errors in original composition. This saving in errors usually also spells out a significant saving of all operator time. In addition, there are additional savings by floor men in the handling of correction lines. Naturally, the increased visibility of reference marks permits operators to "see-what-they-set" without eyestrain. Older operators, especially, find it easier to maintain a higher standard of efficiency throughout the day and throughout the years.

Several years ago, Matrix Contrast Corp. enlarged its service to include the use of distinctive colors to identify different fonts of matrices. This employment of colors such as red, green, yellow or orange, against the same black background used in the original Black and White process, helps to eliminate wrong fonts and provides speed and certainty in the selection of matrices from machine pi stackers or trays.

The New Plant

In the new New York consolidated headquarters the floor space aggregates 9 thousand sq. ft. Being just across the East River from the two Brooklyn matrix manufacturers, it is only natural that Matrix Contrast's New York plant processes the great majority of all of the new sorts and fonts ordered by the users of Matrix Contrast Service.

These new matrices are delivered several times a day by the manufacturers' trucks; or, in case of a real rush, Matrix Contrast has its own pickup service which shuttles to Brooklyn to save valuable hours. Once in the Matrix Contrast plant, the matrices can be processed at any time of the day or night and sent direct to the owner's plant via local truck delivery, parcel post prepaid, or express collect.

As soon as new fonts or sorts enter the New York plant, they are unpacked and their original box is set aside to be used to ship the processed mats to the customer. The serial numbers are noted and checked against the customer's color charts for the proper contrast color to be applied to the reference marks. A package of new sorts that comes into the plant can consist of two items, 20 items or 1500 items, but irrespective of the quantity, the same accurate recording of the order has to be made.

On October 1950, Matrix Contrast installed a new method of handling these orders whereby for each order a form is made out showing the address of the customer, the details of the matrices being shipped, the express or parcel post label, and the number of the holder that is carrying that particular order. Each holder that goes through the processing room has a number on it. This number is recorded on the original order which is left with the package for re-shipment and thus insures that the customer gets the right goods in the right color.

Between the period of October 1, 1950 and March 31, 1951, over 7 thousand orders of this kind have been handled

(Continued on Page 102)

Views in New Office and Processing Plant of Matrix Contrast Corp.

1.—When a user of Matrix Contrast Service orders either new matrix fonts or sorts matrices, the manufacturer sends them to Matrix Contrast Corp.'s new plant nearby in New York, N. Y. Matrix Contrast keeps color charts for all its customers. In this illustration, the serial numbers of new matrix fonts and sorts shipped from the manufacturers are first checked against the customers' color charts before colors are applied to the matrix reference marks.

2.—Processing room in Matrix Contrast Corp's new New York plant. Here line-composing machine matrices are cleaned and then oxidized to produce the black surface on the reference edges of the matrices before application of white or colors to the reference marks.

3.—Matrix Contrast Corp. maintains 31 crews in various parts of the country. They go right into your plant to service matrix fonts at stated intervals. In this illustration is shown a service crew operating a portable processing equipment in a typical newspaper plant. Three trunks are necessary to transport the equipment which weighs between 575 and 600 lbs.

4.—Foyer of Matrix Contrast Corp.'s new headquarters and servicing plant at 154 West 14th St., New York, N. Y.

5.—Foreground: View of shipping department in Matrix Contrast Corp.'s new headquarters. Technicians in background are applying contrasting white or colors to the reference marks in clamps full of matrices.

6.—This is a view in the general office of Matrix Contrast Corp. The servicing plant and home office in New York were combined recently to increase speed and efficiency in the servicing of new fonts and sorts from plants of Brooklyn matrix manufacturers.

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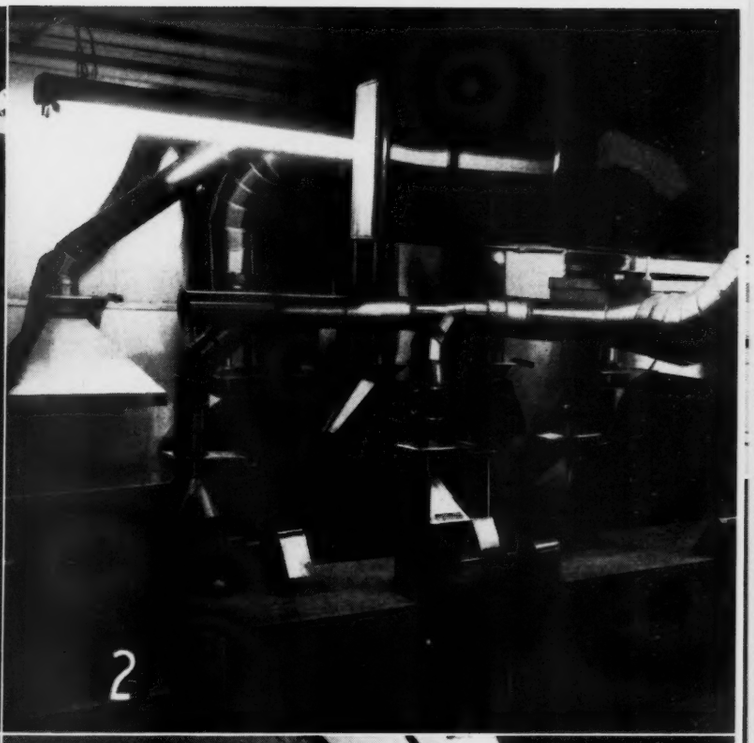
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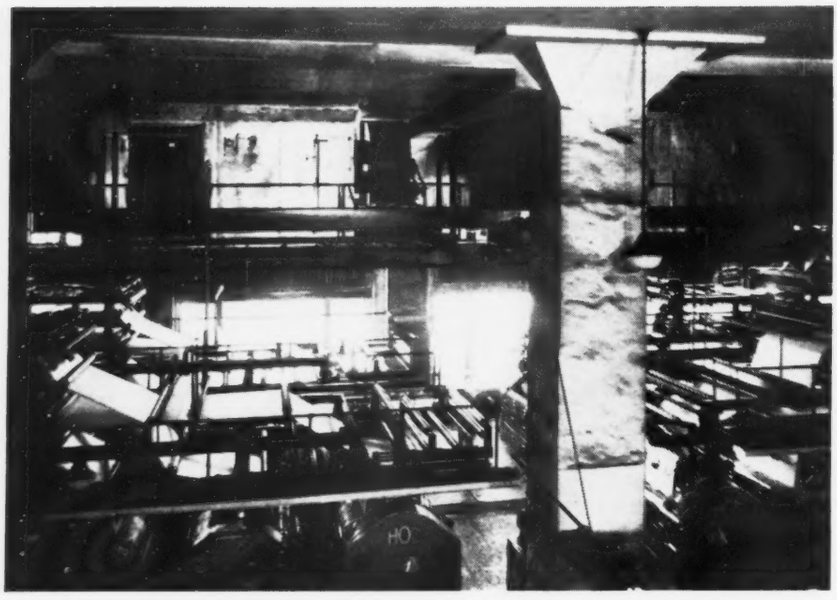

Fig. 1.—Sectional view, interior of pressroom at Milwaukee (Wis.) *Journal*. The ink mist exhaust system is located over the presses. Suspended ink particles are cleaned from the air by Auto-Airmat Filter positioned in the plenum chamber at left of the fan casing in upper left of this illustration.

Air Cleaning Problem in Pressroom Ventilation

By S. H. FAIN*

**Air Filter Div., American Air Filter Co., Inc., Louisville, Ky.*

THE problem of removing ink particles from the air in newspaper pressrooms has engaged the attention of many ventilation engineers over a long period of time. The heavy concentrations of ink mist generated by high speed presses make it necessary to exhaust vast quantities of air from the pressroom which, if not cleaned, stain the walls adjacent to the outlet and deface nearby buildings.

In newspaper pressrooms equipped with ventilating equipment, the air within the pressroom still is contaminated to some extent by ink particles which are not drawn off through the exhaust system, because, at the moment, a system has not been developed for this purpose. It can also be seen that the reason ink particles do not infiltrate to other parts of the building is that a negative pressure is maintained within the pressroom area by suction fans.

The difficulty in collecting ink mist is that it fails to behave like ordinary dust. In viscous filters of the automatic type, the pigment does not settle out of the oil so it can be removed as a sludge, but remains in suspension, causing the oil to thicken which creates a disposal problem. In dry-type filters it tends to cover the surface of the filtering media like paint and closes the tiny air passages. The very nature of printing ink makes the maintenance of filters in pressroom service a dirty job.

In connection with installation of a greater capacity exhaust system, the Milwaukee *Journal* approached the problem by including in the system a new type air filter—the Auto-Airmat, recently developed by the American Air Filter Co., Inc., Louisville, Ky. The filtered air from the pressroom is discharged to the outdoors. With the Auto-Airmat Filter the media is changed automatically as it becomes clogged with ink and oil.

AAF dust engineers recently developed the Auto-Airmat, an automatic dry-type filter, for removing heavy concentrations of lint from the recirculated air in textile mills. This application seems remote from a newspaper pressroom except that paper lint is part of the ink mist problem. It proved so satisfactory in the textile field that AAF considered its particular advantage as a possible solution to pressroom ventilation.

Endless Screen Curtain Supports Filtering Media

The filter consists of an endless screen curtain of woven stainless steel wire which rotates over top and bottom rollers in a vertical filter casing. The filtering media is a paper-like cellulose tissue composed of one or more plies to vary its density and is supplied in continuous rolls. The fresh roll of clean media is mounted on brackets at the top of the filter casing to be transported down the face of the filter by the rotating screen through which the air passes. The Airmat paper is then rerolled with its dust load at the bottom of the filter.

The screen, rotated by a fractional horsepower motor operating through a

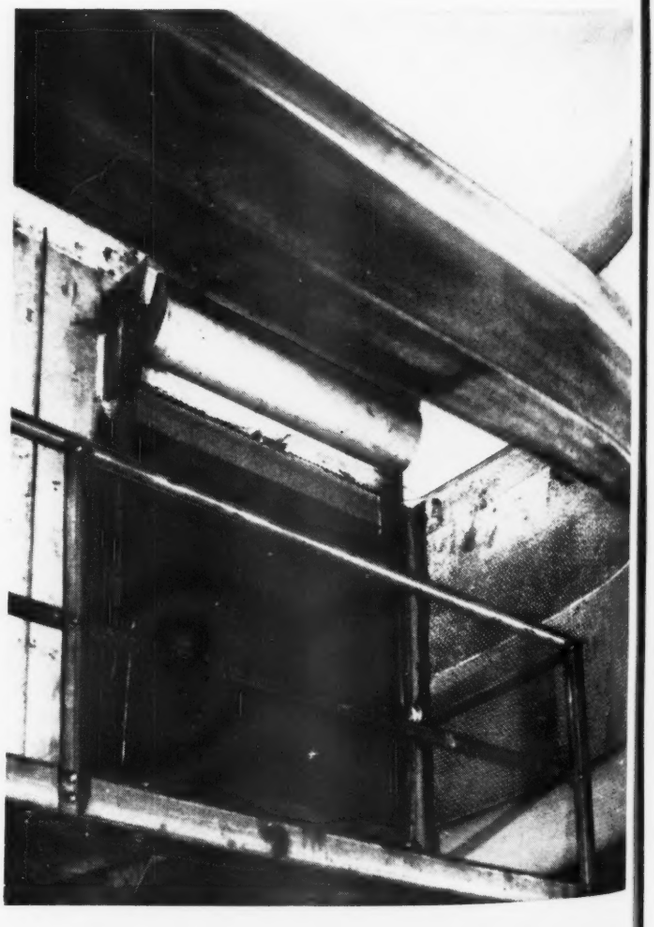

Fig. 2.—View of Auto-Airmat Filter photographed immediately after fresh cleaning media has moved into the air stream.

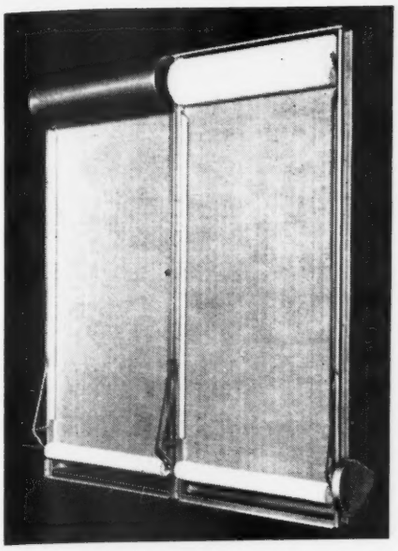

Fig. 3. — View of two-section Auto-Airmat automatic self-cleaning air filter with top right-hand roll cover removed to show how filtering media is fed from the top of the casing down the face of the filter and re-rolled automatically at the bottom of the filter.

gear reducer and chain drive, is controlled by a pressure switch. As the filter curtain becomes dirty, it offers more resistance to the air flowing through it. When this resistance rises to the point at which the pressure switch has been set, it closes the electric circuit and starts the drive motor that rotates the screen. After a sufficient amount of clean Airmat paper has been added to the curtain to cause the resistance to be reduced to the proper level, the switch opens the motor circuit. The curtain then remains stationary until the resistance again reaches the predetermined high point. This method of controlling the curtain movement apportions the amount of Airmat paper used to the amount of dust in the air.

Test Data

Since it is impossible to simulate newspaper pressroom conditions in a laboratory, arrangements were made with the Louisville (Ky.) *Courier - Journal* and Louisville (Ky.) *Times* to install a test setup in the new pressroom. The test unit consisted of a small size Auto-Airmat filter connected by a sheet metal housing to an exhaust fan. This unit, which cleans and recirculates a given quantity of air, was placed in the aisle between two rows of presses. Tests were conducted under the observation of AAF engineers and H. Earle Runion and Associates, Louisville Production Engineers and Pressroom Consultants. The purpose of the tests was to establish efficiencies in ink mist removal and comparative operating data at various capacity ratings.

A series of readings was made over a 12-day period with presses running at various speeds to determine optimum operating conditions for the filter. With 2-ply Airmat paper and air velocities through the filter curtain in the order of 480 f.p.m., it was possible to obtain cleaning efficiencies of 98% with nominal paper usage.

Operation of Curtain

Aside from its high efficiency and simple automatic operation, the Auto-Airmat was found to offer another advantage in pressroom ventilation: The usage of the Airmat paper, being controlled by the resistance differential across the filter curtain, will vary with the amount of dust in the air to be cleaned. When the dust concentration is low, the curtain will move less frequently than when the presses are operating. Thus, the amount of Airmat paper used will be in direct relation to the dust load. This means that no special attention or adjustments of the Auto-Airmat are necessary to meet the changing operating conditions in the pressroom.

Installation at *Journal*

The first pressroom installation of Auto-Airmats was made at the Milwaukee (Wis.) *Journal* when a new exhaust system was installed. The old system, which handled 20 thousand cu. ft. of air per min., had become inadequate with the higher speed presses and attendant increase in ink mist generation. Ink mist stained the outside walls near the exhaust outlet as well as the building across the alley.

Four separate exhaust systems each consisting of an exhaust fan, plenum chamber, duct connection and two filter sections were installed. Each system handles 10 thousand c.f.m. which totals twice the capacity of the original exhaust. The filters were placed on both sides of the sheet metal plenum chambers which are located on platforms suspended from the ceiling over the presses. The 40 thousand c.f.m. discharged outdoors by these fans comes from three sources: 12 thousand c.f.m. from the outside through six wall grilles, 18 thousand c.f.m. through floor gratings from the reel room, and 10 thousand c.f.m. by infiltration through doors and windows.

With the improved ventilation, ink mist in the pressroom has been reduced to a minimum. In addition, housekeeping has become easier with less deposit on walls and equipment.

The cleaning efficiency of the Auto-Airmats can be seen at the exhaust system discharge outlets which of necessity are located in the front of the building where panes of the pressroom windows were removed and replaced with the discharge louvres. If unfiltered air were exhausted through this arrangement, large areas of the facade of the building would be stained and smeared. But with filtration only a negligible amount of particles escape the filter and precipitate on the windows. These are dry, possibly because they are so small that the vehicle has been evaporated, and may be brushed off at infrequent intervals.

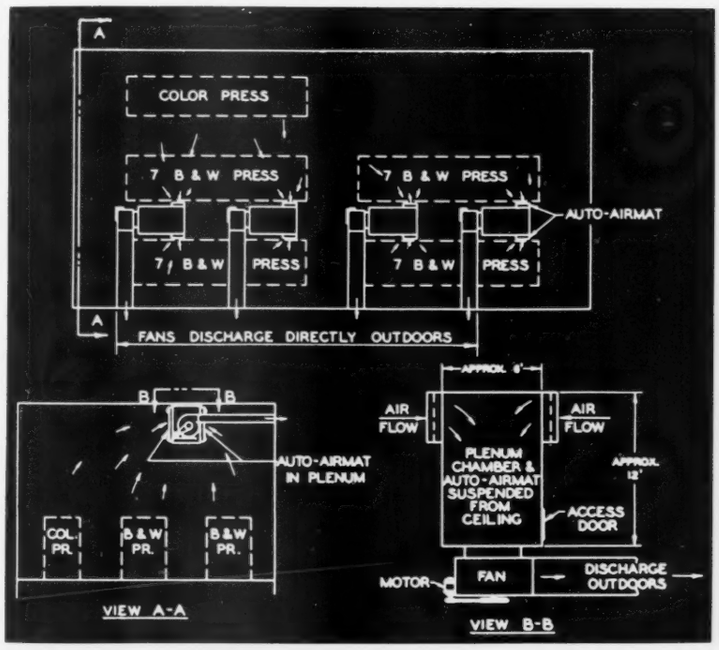

Fig. 4.—Schematic drawing of pressroom ventilation system at Milwaukee (Wis.) *Journal*. In the plan view shown at the top, the exhaust system discharges cleaned air through outlets or louvres at the front of the *Journal* Building. The four separate exhaust systems handle 10 thousand cu. ft. of air per min.

The maintenance department appreciates the simpler servicing of the Auto-Airmat which consists of removing the used media with the collected dust and ink rolled inside and dumping it in the incinerator.

IT'S THE ONE . . . the
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32 "ANNUAL INTERNATIONAL CONVENTION
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Flying Offset Printing Press for the U. S. Armed Forces

ONE of the most interesting recent innovations in printing equipment is that of the "flying printing press" developed by Harris-Seybold Co. for the five basic units of the U. S. Armed Forces in undisclosed number. George Dively, Harris-Seybold President, declined to estimate the dollar volume, but said it would probably run into millions. The equipment is of interest to the Graphic Arts industry because of adaptation of standard equipment to a vital Armed Forces activity. It is also of interest because printing engineers, and management, production and mechanical executives may want to consider using so far as possible one of the ideas incorporated in the packaged press in normal plant planning.

The new "flying printing press" provides facilities for on-the-spot reproduction of aerial charts, maps, reconnaissance photographs, psychological warfare materials and urgent printed material.

The press is designed for use at advanced airstrips and bases. It is reported that the press can be unloaded from an airplane and be delivering printed material within 2 hrs. time.

The packaged press weighs 5 T., including the cabinet, base and all equipment ordinarily found in the pressroom. There are two main distinguishing features: (1) The press is mounted on a steel table or skid with thick metal runners like a sled under it; (2) The shipping container built around the press actually is a pre-fabricated pressroom. Thus the shipping container consists of cabinets and panels which break down to form all the pressroom facilities required for immediate operation.

The skid mounting of the press functions as the bottom of the shipping container. Rollers can be put under the runners, so that the package can be pushed from place to place—in a hangar, for instance. A jack is built into each of the four corners of the base, each of which is adjusted until the press is level. An all-directional bubble level, using the same principle as a carpenter's level, indicates when the base is leveled. A printing press must be level to keep the cylinders and gears from binding, and to allow the ink to be distributed properly.

The package around the press is made of marine plywood. On each end of the package are two upright cabinets, somewhat like large kitchen cabinets. Enclosing the area between the cabinets are six large plywood panels, which have detachable legs and can be set up as pressroom work tables.

The two end cabinets are mounted on wheels, and are rolled down a portable ramp from the metal base, guided by two men. One cabinet has a slanted table on which the pressman can examine his printed sheets. Under the table-top several offset printing plates can be stored. On each side of the inspection surface are cupboards for sponges, wiping cloths and other essential sundries. At the bottom of the cabinet are all the chemicals and solutions used in offset printing.

The other cabinet is fitted with a slab on which the pressman can mix inks. This cabinet also contains racks in which can be locked two complete sets of press rollers. Here also are sliding tool drawers, each recessed to contain a particular wrench, micrometer, ink knife or other tool. Lubricating guns and electric cable for connecting the press to a power source are stored in individual cupboards.

Max. sheet size of the Air Force press is 22½ in. by 30 in. and the rated speed is 6500 sheets per hr. A 4 h.p. drive motor and a 1 h.p. air pump for vacuum can be operated either on a.c. or d.c. current.

It is also reported that Army Quartermasters are contracting for another press known as the Harris 17 in. by 22 in. The latter press, it is said, will handle a sheet of paper measuring 17½ in. by 22½ in. at speeds up to 7000 sheets per hr.

The packaged press for the Air Force is approx. 9 ft. 6 in. long, by 5 ft. 6 in. wide and 6 ft. 4 in. high. It weighs about 5 T. packaged.

Harris-Seybold, it is also reported, now is working on an offset platemaking package and has a preliminary design for a paper cutter for the presses.

In the Graphic Arts industry it has been suggested that perhaps some of the ideas incorporated in the flying press could be utilized in plant layout to a certain degree. For instance, the presses are built as self-contained units. Each press is built on a substantial base; an all-directional bubble level is built into the press; four jacks screws provide a means for leveling the press and keeping it level.

In most printing plants it has been found desirable to move equipment around after a proposed layout has been considered perfection itself. It may be desirable to move a machine 3 ft. this way or even 6 in. another way in order to eliminate a hindrance to smooth production. It is not too easy to move some machinery once it has been installed because of attached or remote electrical, water, air or gas connections. It seems that some thought should be given by management, printing engineers and production and mechanical executives to the complete unit idea when planning equipment installations or when planning plant layouts. The self-contained unit idea, so far as possible, is worth thinking about even in permanently located equipments of all types. One of the recent advancements to this effect can br found in the plant of the South Bend (Ind.) *Tribune* where any line-composing machine in the plant may be moved out of position and replaced with another ready for operation in a matter of minutes. The idea of self-contained units, of course, is not entirely new to mechanical executives. In many instances, equipment manufacturers build their equipment so that a machine may be put into action simply by plugging into an electrical connection. But fullest advantage of the idea has not been taken in the past.

Detailed Pictures Explain Construction and Handling of Packaged Flying Printing Press

1.—At Dayton Air Fields a demonstration was conducted recently to show procedure for handling press during unloading operations, actual operation of the press and reloading. In this picture a fork truck rolls from a C-82 cargo plane toward demonstration site nearby. If a fork truck is not available at an overseas base, the packaged press unit can be dragged on skid, rolled on rollers, or hauled by truck to printing site.

2.—The pressmen roll one of the end cabinets down a ramp. The cabinet is constructed to provide working surfaces, tool storage space and also holds operating accessories. Two men can do handling and operating. At right one of the package side panels has been set up in table form for use by men when press is operating.

3.—Before the press is placed in operation it is leveled by means of four built-in jack screws. At right Capt. O. R. Rauscher, project officer for Air Force test runs watches as Harris-Seybold Serviceman A. Dymond (left), while looking at directional bubble level, directs pressman in leveling operation.

4.—For those who wonder how the 5 T. press may be fastened securely while being transported by plane, here is the answer. Sturdy lashings are applied to steady the press unit during flight. The base of the press was built to meet requirements for lashing, hoisting and dragging. In this picture, Crew Chief of Air Force C-124 Cargo Plane tightens steel cable running over top of the container. Floors of all cargo aircraft are provided with recessed ring bolts so that cargo may be made secure from a number of positions.

5.—One of the drawers contained in the built-in cabinet shown in Picture 6. There are a number of trays like this one which contains spare press parts. As will be seen, this drawer contains ink knives, micrometer, feeler gauges, shears and polishing block.

6.—Tools, chemicals and all operating supplies except paper are contained in these work cabinets. During transportation, they form the end sections of the shipping container, mounted on wheels for easy handling. The seven drawers of the right-hand cabinet contain tools and spare parts. The left-hand cabinet contains chemicals and lubricants below; sponges, wiping cloths and other essential items above in cupboards. Both cabinets have individual lighting systems. Storage space for offset plates is provided underneath inspection table. Ink slab is at left-hand corner of right-hand cabinet. Storage racks hold two complete sets of rollers; lock mechanism holds them securely during flight.

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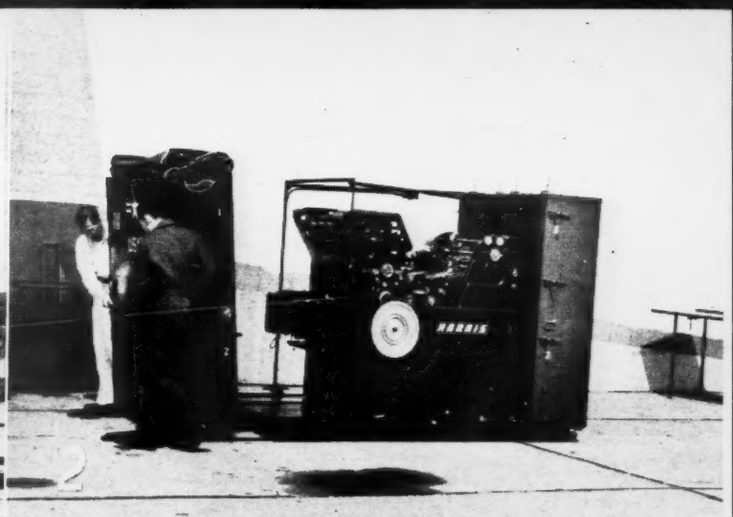
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EXPENDABLE
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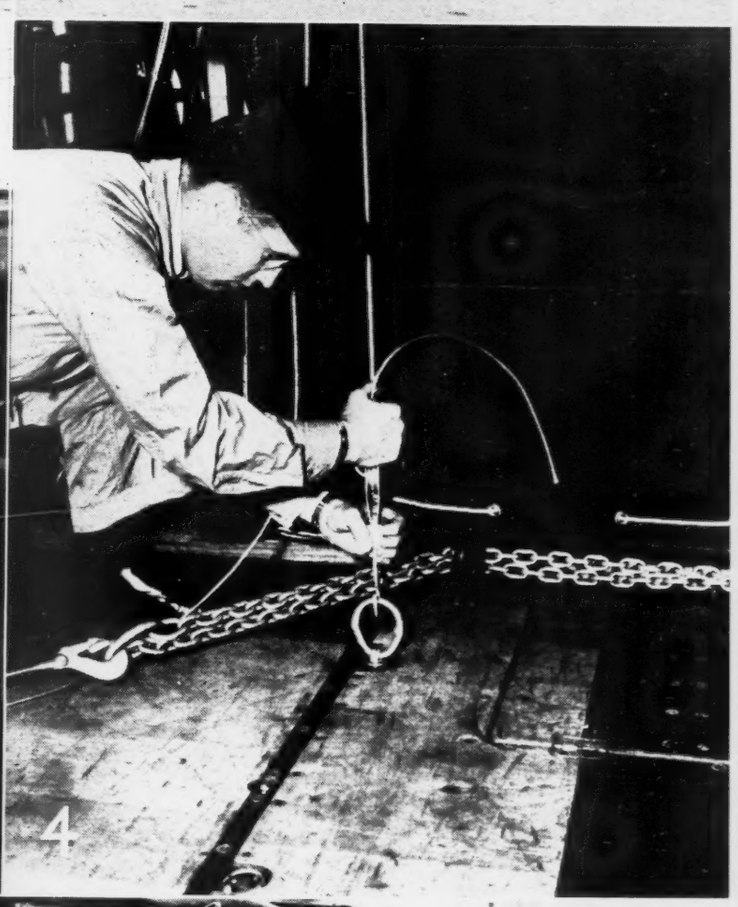
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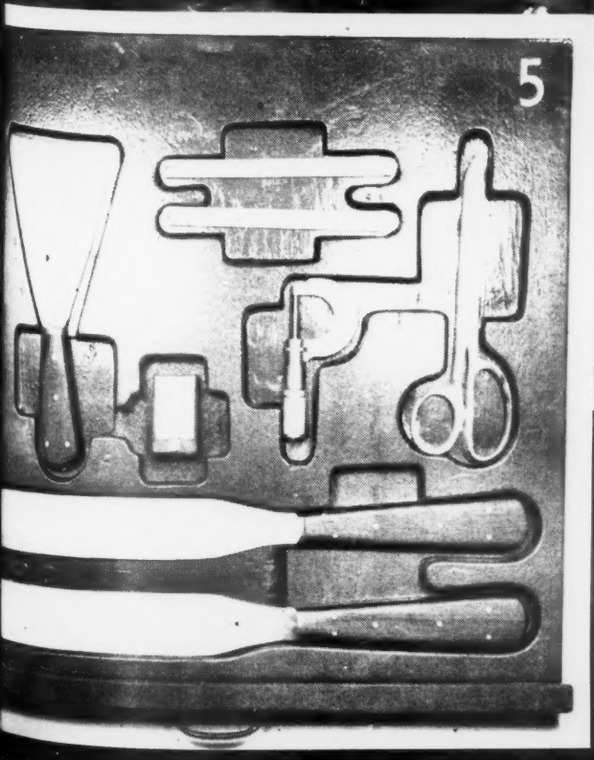
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NPA

Printing and Publishing Division

Controlled Materials Plan

BEGINNING with the third quarter of the year, July 1, 1951, the Controlled Materials Plan will go into effect. Under this plan, steel, copper and aluminum will be made available for defense and defense-supporting production and construction. At the same time, the National Production Authority will encourage non-defense production to continue to the extent that materials are available and other NPA regulations permit.

Although the Controlled Materials Plan as outlined below will not require any action on the part of producers of printed matter, it is apparent that it will have a direct bearing on the future operation of a printing plant. Manufacturers and producers of printing equipment and supplies containing steel, copper or aluminum will receive scheduled allotments of these three basic metals for their production. Whether these allotments will be sufficient to meet the needs of printers will depend upon the requirements for these metals for defense production, such as tanks, guns, planes, etc.

It was stated by CMP officials that there will be a substantial balance of these metals available for nondefense use. This balance of materials, after allotments under CMP, will be available for nondefense production. A rough balance between supply and demand for the left-over balance will be preserved by using other NPA powers, such as limitation orders to reduce less essential civilian production and assure a proportionate amount of materials will be available for civilian business, large or small.

This plan was adopted by the Government as the best method of assuring that efforts of industry will be in balance. CMP provides the facts and figures on supply and demand of key materials and components that make it possible to strike a better balance between demand and supply of controlled materials for non-defense uses.

It will be possible through CMP to determine materials needs, and to program essential production and allocate the required materials. It is then possible to measure the balance of key materials remaining for nonprogrammed production and to employ other NPA controls, such as (limitation) orders, to effect a measure of balance between nondefense demand and the remaining supply.

CMP doesn't give a priority for materials—it gives a certified allotment. The plan itself is an affirmative method for scheduling production of defense and defense-supporting items, in the light of materials supply, and for allotting the basic materials to assure completion of that production.

Under the Controlled Materials Plan an accurate and workable yardstick had to be provided to measure essential production needs against materials supply and for programing production and the use of materials. Three basic metals—steel, copper and aluminum, were chosen for this common yardstick. These are the controlling materials as well as the controlled materials. The three metals are not only the most widely used materials in defense production, which therefore must be controlled and allocated; they are so widely used that they become, in themselves, the simplest instrument for programing and controlling the use of many other scarce materials.

CMP demands accurate information as to the need for, and the supply of, these materials, both as to total tonnage and as to specific shapes and forms. The Plan also requires a procedure that provides for the establishment of production needs, the approval of production schedules, and the allotment of materials with minimum supervision and paper work.

In order to make CMP procedures as simple and efficient as possible, all products using steel, copper or aluminum are classified into "A" products and "B" products. "A" products are those of special design or for special use which are sold to one or relatively few customers. "B" products are those of general design, sold to many customers or through many outlets, where it is not convenient or efficient to pass on materials allotments from each customer to the "B" product producer. Manufacturers of "B" products included in the CMP program must present requirements data, and receive schedules and allotments directly from the appropriate NPA Industry Division.

Newspaper Industry

NPA recently informed the Newspaper Industry Advisory Committee that the newspaper industry should be able to get enough newsprint for its needs if it makes an aggressive effort to reduce waste. NPA said that no limitation order is now being planned, but recommended that an all-out conservation program be activated. The committee agreed that curtailment of waste is the most effective method to avoid placing newsprint under control.

A task group will be appointed to recommend a pattern to be followed in meeting applications for special assistance by firms needing additional newsprint in an emergency.

Magazine Industry

Paper inventory limitations are not needed now, NPA recently told the Magazine Industry Committee. The set-aside of paper for Government uses virtually has been neutralized by increased production and the industry should receive about the same quantity of paper this year, as last.

Shortages of sulfur and printing ink components, it was pointed out, have been overcome by industry and Government cooperation. An order is now being prepared to allow increased use of DO-97 for obtaining MRO items, such as zinc for engravings. A task group will be appointed by NPA to suggest possible conservation methods.

Industry Can Meet Demand

The Commercial Printing and Lithographing Industry Advisory Committee recently told the National Produc-

(*Continued on Page 94*)

Goss Scale Model Press—A scale model of the Goss Headliner press in the plant of the Atlanta (Ga.) *Journal* and the Atlanta (Ga.) *Constitution* was presented to executives of the newspapers by Goss officials at the recent ANPA meeting in New York. The model is a replica, 1/40th actual size, and is complete in every detail including substructure, cylinders, folders and angle bars. Similar models will soon be presented to all newspapers that have purchased Goss Headliner units. Shown in the picture are (left to right): C. S. Reilly, Vice Pres., The Goss Printing Press Co.; F. A. White, Southeastern Goss representative; Horace Powell, Business Mgr., and George C. Biggers, President, both of Atlanta Newspapers, Inc.; J. C. Council, Publisher, Tampa (Fla.) *Tribune;* L. D. Wright, Goss East Coast sales office.

NALC Elects Officers at its May Cleveland meeting. In front row, from left to right, they are: Herbert H. Johnson, Offset Supt., A. S. Gilman, Inc., Cleveland; President—Anthony Capello; Second Vice President—John F. Maguire. Back row, left to right: Past President, Edward W. Harnish; Treasurer—C. Frank Peterson; Secretary—Joseph H. Winterburg.

NALC Convention

AN innovation at the Sixth Annual Convention of the National Association of Litho Clubs, held in Cleveland, May 11 and 12, consisted of Technical Information Centers set up in the ballroom of Hotel Cleveland on Saturday afternoon. Twenty-two tables made up the array, each devoted to a particular field and each manned by experts in that field. Anyone desiring information on a subject could identify the proper table and ask questions in an informal conference.

The table subjects, as marked by placards, were "24 Sheet Poster," "Photo-Gelatin & Collotype," "Photo-Composition," "Copy Preparation," "Camera—Line & Halftone," "Camera—Color Separation," "Color Correction & Dot Etching," "Layout & Stripping—B&W—Color," "Plate Graining," "Plate Making—Surface," "Plate Making—Deep Etch," "Plates—Multi-Metal," "Plates Presensitized," "Photo Lac & Blue Glass," "Litho Papers," "Litho Inks," "Litho Rollers," "Litho Blankets," "Press Equipment," "In-Plant Training," "Press Operation," and "L.T.F."

Highpoint of the regular convention sessions was the talk by Lawrence Brehm of Western Litho & Printing Co., Racine, Wis., on the subject *In-Plant Training*. His discussion revealed the sharp contrast between modern methods now being applied and the old catch-as-catch-can methods of bygone days.

Mr. Brehm, who is in charge of Western Printing's Technical Institute, said that employers had spent thousands of dollars on new machinery, but such equipment is ineffective unless skilled men are available to run them. Just what has been done by the Institute in the Western plant in the training of apprentices, journeymen, and foremen was outlined.

First, it is important to screen new employees carefully. They should be checked as to physical and mental health, homelife, general intelligence (through standard tests), eyesight, and color perception. Next, they should be checked as to education—school and job experience, special training in arts and sciences and mechanics, special interests, hobbies, and vocational leanings. And, finally, they should be studied as to natural aptitudes through aptitude tests, because people do their best work when they are happy. Special abilities, such as the dexterity of the fingers for an apprentice in the composing room, should be noted.

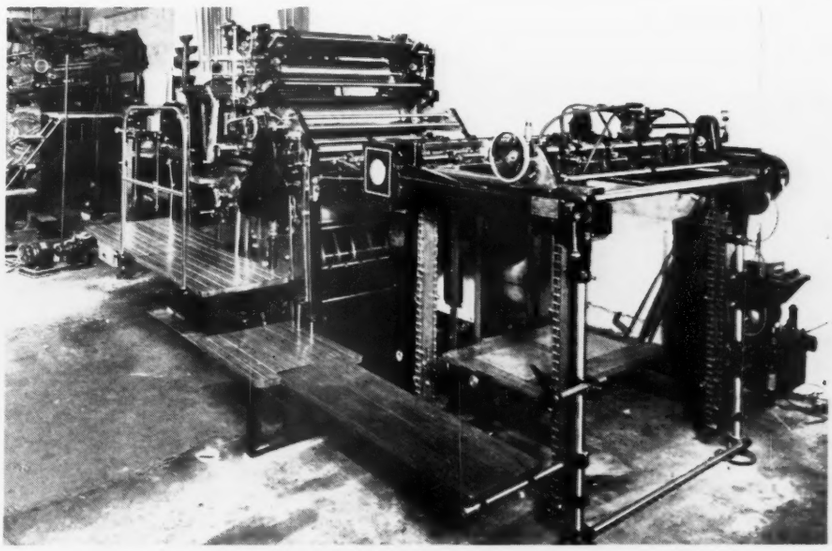
As an example of apprentice trade training at Western, he pointed to the program which has been followed in the bindery over the past three years. Five classes are now going on, and the instructor for each group is a journeyman who regularly operates the equipment. Classes run for 10 months and have been unusually successful. Attendance never runs below 95 percent. There is a class for guillotine cutters; one for the three-knife trimmers, Brackett, tumbler, and straight line; one for folding and wire stitching; one for casemaking and casing-in; and one for combines or mounting machines.

Each course offers (1) General explanation of the machine, its functions, and identification of its parts; (2) Thorough study of the safety factor; (3) Study of the motive power, its control, and its transmission through the machine; (4) a study of the necessary lubrication and maintenance of the machine; (5) Very comprehensive study of machine adjustment and makeready; (6) Actual practice by the student on job layout, makeready, machine adjustment and operation of the machine on sample jobs. (7) Layout, makeready and operation on actual production jobs; and (8) Review and final test.

Journeyman trade extension training on equipment coming in, foreman training on handling people in the graphic arts, and related training programs are also offered. Programs must be well planned and organized. Foreman and key men are usually drawn from the ranks, and in the past they had to learn management of personnel by trial and error. Today they are getting real help. In-plant training is adapted to the little plant as well as the large one.

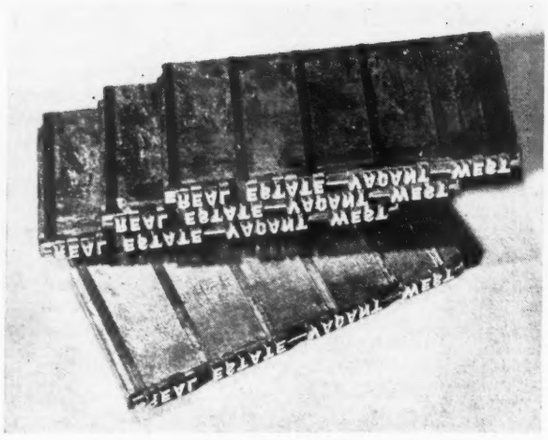
The Friday morning program of NALC was a general business session, following which the Harris-Seybold Co. was host at a luncheon and a plant tour of the plant in the afternoon. Both the chemical and press departments were inspected.

(*Continued on Page 98*)



Pacific Coast Installation The first of several ATF-Mann Offset Presses to be installed on the Pacific Coast this spring was reported recently at News Publishing Co., Sacramento, Calif. The press will become part of the new offset department at the News company, according to L. R. Haworth, General Manager. The installation was made under the direction of Willis C. Johnston, Northern California Manager for American Type Founders. Other officers of the News company are: John N. Clark, President and Sales Manager; and J. Donald Adam, Vice President and Production Manager.

Seeability Note — With respect to handling the slugs when the makeup man inserts them in newspaper classified or liner advertising columns, all assistance possible in the way of artificial illumination is needed. Newspaper classified advertisements in most metropolitan papers are set on slugs which measure 14 lines to the inch. Consequently, every aid to seeability is appreciated by the makeup man.



In the composing room of the Chicago *Tribune*, the fluorescent illumination over the makeup trucks is excellent. But on account of the diminutive size of the type, any additional lighting aid is welcome by the makeup man. One of the printers in the *Tribune* composing room had a happy thought. The departmentalized headings for the classified pages are cast on an 8 pt. slug. Why not ink the letter characters of the headings with chrome yellow ink? Heading slugs so inked have high visibility in the form and enable the makeup man to locate quickly the headings under which classified ad slugs are to be inserted, in contrast with the repeat and new slugs in the form.

At the *Tribune*, the headings are cast in advance. After having been proofread, the slugs in the galleys are inked with the chrome yellow job ink and are then placed in the galley rack until needed for makeup purposes.

Maintenance *of all printing equipment correctly now more essential than ever — It's the right thing to do — Author advises about press maintenance*

By C. O. SIEBKE*

**Chief Design Engineer, Printing Machinery Div., Electric Boat Co.*

NOW is the time to plan on keeping your machinery in good operating condition. A little neglect can cause untold trouble. A little care can extend indefinitely the life of your equipment. Establish a system now for regularly doing those things that will prolong the life and maintain the operating efficiency of that equipment.

Most important is the regular lubrication of machinery. Spend a few minutes with the oil can every day.

Plan to spend one day every six months to give your machine a thorough cleaning. Dust, dirt, and lint, mixed with oil, can produce a barrier that will prevent oil from reaching the surfaces that most need it.

Every printing press has mechanisms operating at high velocities and these need positive and adequate lubrication. Make sure they get it. The manufacturer of your press has provided lubricating charts and instructions which must be followed if you want to keep rolling. Be sure to lubricate every point indicated on the charts and keep your eyes and ears open. A little squeak in the press is a sure danger sign and needs instant attention. Stop immediately, investigate, locate the trouble and correct before starting the run again. Don't take a chance.

When going about the oiling job, carry along a clean rag and use it. If you get excess oil on any part, wipe it off. Don't let it drip. The excess oil, if not removed, will pick up dust, dirt, and lint, and may do considerable damage. Oil mixed with dust acts just like a lapping compound, and will cause considerable wear on rubbing surfaces.

With a rag wipe off all grease fittings before applying the grease gun. The terrific pressure produced by a grease gun will force all of the accumulated dirt on the fitting right into the bearing.

Special care and cleanliness are necessary on various parts of presses. Some of them are listed below:

Clean out the ink fountain thoroughly every time the ink is changed. Don't let the ink dry and harden. Some of it may flake off and drop into the press.

After you have finished washing up press rollers, clean off the ends. Don't let ink build up and accumulate on the ends.

Wipe off the shaft ends of the ink vibrating rollers. Keep them clean and oiled. The back and forth motion may force dirt into the bearing unless this is done.

Keep the gears clean and oiled. Once every six months brush and clean off the gear teeth with a stiff brush. Hold a rag alongside the gear tooth and brush toward the rag so it will catch the dirt. Don't do one gear at a time, because dirt on the mating gear will be transferred to the clean one when you turn over the press. Clean as much of every gear in the whole train as you can, then jog the press till the uncleaned teeth are exposed. When this is done, apply new lubricant to the gear teeth with a clean brush. Use only the lubricant recommended by the manufacturer and make sure every tooth gets its share of lubricant.

The cylinder on most presses are mounted on ball or roller bearings. They require lubrication only once every three months. Don't pump a whole gun load of grease into them. They need only three or four shots. An excessive amount of grease in these bearings may cause them to heat up.

Another source of trouble, if neglected, is the delivery gripper bar chains. These should be kept well lubricated with a

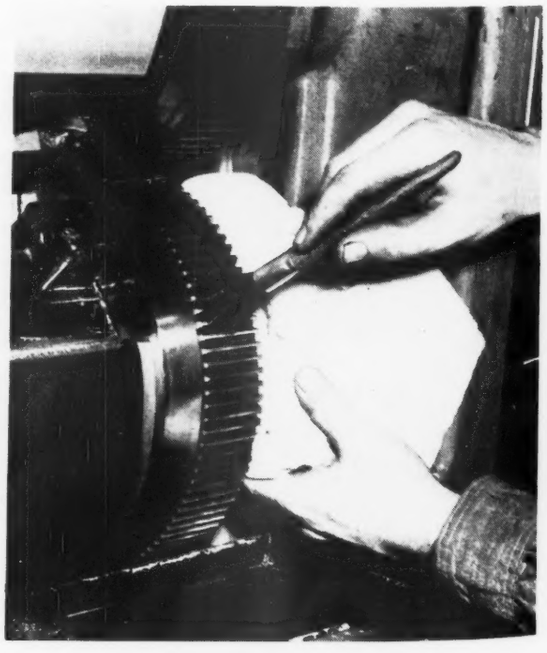


Fig. 1.—On presses, clean the gears every six months. Using a stiff brush, hold the wiping cloth alongside the gear and brush toward the wiper so it will catch the dirt.

light oil that will penetrate to all moving parts. This can best be done with a soft brush. Just let it rest on the chain, while jogging the press slowly, and make sure the oil penetrates. Every six months the chains should be thoroughly cleaned with a solvent. Clear gasoline or benzine will do the job nicely and will dry quickly. (Incidentally, watch that cigarette.) The easiest way is to hold a bucket containing the solvent under a portion of the chain, and with a soft brush slosh the solvent on the chain, allowing it to drip back into the bucket. Every link, on the chain, has a roller which must be free to rotate, and each one should be checked to make sure that it does so. If it sticks, the roller may wear flat. The guide supporting the chain will also wear from sliding contact with the frozen roller, and this may result in faulty operation. Any links that are not perfect in this respect should be replaced. Most manufacturers can supply repair links, and the installation of them is a simple matter. After cleaning, allow the chain to dry thoroughly and then lubricate with a light oil as described above. Check to make sure that the chains are not set up too tight. If they are, excessive wear will result, and that means early replacement. Incidentally, most chain, at this time, is on a critical list and replacement may take a long time.

It is well to check the cam follower rollers frequently. Most of them are of the needle bearing type and should spin freely. They should be lubricated with a light oil and if they show any signs of sticking, have them replaced. They are inexpensive to replace and easy to install. A cam follower roller that is frozen will cause excessive wear of the cam itself and may change the timing of a critical element of the press.

Modern high speed presses are intricate pieces of machinery and only specially trained men are qualified to service them. Don't attempt to make any changes in adjustments except those listed in the Operation Manual which are needed when changing sheet sizes. Every press manufacturer has arrived at standard settings and the press will operate best when set to these standards. If any difficulty arises in the operation of the press, don't attempt to change any of the standard settings. The pressman should confine himself only to those adjustments recommended in the Operation Manual. On the average press, running at 6000 i.p.h., the sheet of paper is stopped for only about 1/6 sec. to perform the registering operation. The side guiding operation takes about 1/10 sec. Any asjustments made to the register mechanism are critical and should not be touched by the pressman. Most of these adjustments, made at the factory with special equipment, are held to very close limits and a slight change in any one of them may completely throw your press out of time. There is also danger of considerable damage being done to your machine.

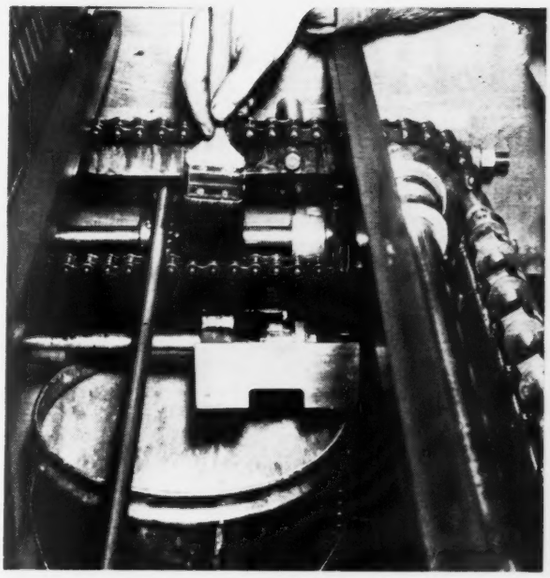


Fig. 2.—The gripper bar chains should be cleaned every six months. Illustration shows a bucket under section of chain. Solvent (gasoline) is sloshed on the chain with a soft brush. After cleaning, the chain is lubricated with a light oil applied with a soft brush. At this time, the chains can be inspected for defective links and rollers.

Far too many service calls are made because some pressmen are tempted to make changes in special adjustments that should not be touched. No matter how good a mechanic the pressman is, the best thing to do is to leave those factory adjustments alone. If the service man knows that the pressman is reliable in this respect, it is far easier for him to locate the source of your trouble. Maybe a telephone call to him would be all that is needed to clear it up.

For the pressman who has a reputation of tinkering with these special adjustments, the matter becomes serious. The service man must go over the whole machine and check every adjustment before he can even begin to analyze the problem. This is an expensive process and is totally unnecessary. Heed this warning if you want repair bills reduced.

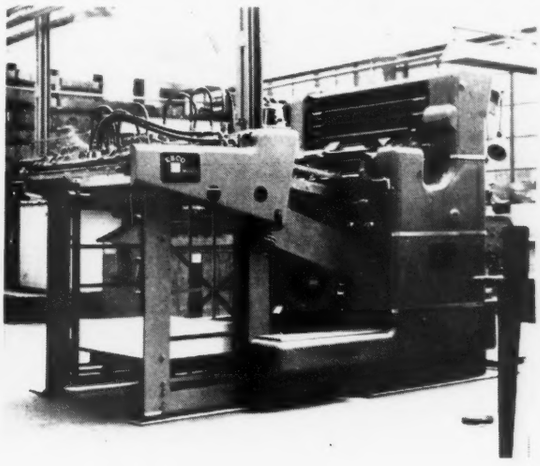
Rubber, zinc, and aluminum are critical materials and will be increasingly more difficult to purchase in the months ahead. Rollers and blankets on offset presses will need all the care and attention that can be given them, in order to prolong their life.

Don't throw away those plates that are too short to reach around the plate cylinder from clamp to clamp. They can still be used for some black and white jobs, where register is not too fussy. Have the platemaker put a strip of pressure sensitive adhesive tape across the trailing edge of the plate. Get the size which is 1/4 in. wide.

When you are ready to install the plate, insert the leading edge of the plate in the clamps, pull off the protective strip covering the tape, and with the press on pressure turn it over for several revolutions. The pressure between the blanket and plate cylinders will securely fasten the tail end of the plate to the body of the plate cylinder. Don't use tape any wider than 1/4 in. as the plate may be damaged when trying to remove it from the cylinder at the end of the run. If the plate is much smaller than the standard size required, it may be necessary to cut the blanket cylinder packing to the size of the area covered by the plate. In order to avoid damage to the form rollers and blanket, be sure that all edges of the plate are smooth, even, and without burns.

A final suggestion is in order on scrap metal. If replacement of any part of the press is necessary, make sure the worn out part gets into the scrap metal box, and at the next scrap metal drive see that it is turned in. This may get those additional parts you need.

Complying with all suggestions listed above will reduce down time, repair bills and will see you well on the road to no trouble ahead.



E.B.Co. Press in Swiss Plant—Pictured here is a new E.B.Co. Offset Press installed in the printing plant of Sauberlin & Pfeiffer, Vevey, Switzerland. The press was sold through Printrade Machinery Corp., export sales representatives of Printing Machinery Div., Electric Boat Co.

If your printing plant executive status has changed, please notify *Printing Equipment Engineer* promptly. By doing so, you can be sure to receive this magazine promptly at your business address.

The ABC of OFFSET

For Letterpress Printers

By George Jos. Lenzer

XVI—HALFTONE AND THE CONTACT SCREEN

"I WOULD like to install camera equipment in my plant, but, I'm rather frightened by what I have learned about the halftone screen. If there were a simpler way to produce a halftone reproduction, I might consider the installation".

The foregoing dialogue is quite common among the interested printers who desire to expand their facilities, and install offset equipment.

Referring to the opening article of this series, it will be recalled that "Offset is not the simple process it has been so frequently claimed to be".

Photography for halftone reproduction is still a complicated process, and a simple means of accomplishment has not as yet been invented.

To those who fear the glass cross-ruled halftone screen and the many operations associated with its use, there is one alternative, the Contact Screen at *B*, Fig. 28.

It must be remembered, however, that for each operation and technique its use eliminates, new and different operations and techniques must be employed.

What is the Contact Screen?

The one most generally used is the Magenta Contact Screen, also called the Variable Density Screen and the Vignetted Halftone Screen.

The Contact Screen was introduced as a replacement for the glass halftone screen, and differs both in construction and principle. The Magenta Screen is photographically produced on a plastic base photographic film, with an overall dot formation of geometrically spaced vignetted dots of variable density.

Through chemical processing, the gray-silver image is replaced with a dye-coupled magenta image.

The magenta-dyed vignetted dots being more transparent to magenta light rays than to any other, provides the basic principle of contrast control.

Relative exposures made through yellow, rose or magenta filters determine the depth of light penetration through the margins of the vignetted dots. This light ray penetration is greatest when a rose filter is used, providing an increase in contrast, while the use of a yellow filter reduces the penetration of light rays, thus decreasing the contrast.

Halftone Effects

Because the dots are vignetted (variable density), instead of being opaque, and are used in contact with instead of being separated from the negative surface, the pinhole, penumbral and diffraction theories of the glass halftone screen do not apply.

It will be remembered that when the glass halftone screen is used, the resulting photographic halftone dot formation is dependent upon the three basic theories named, plus time of exposure and the intensity of the activating light rays, *C* and *E* in Fig. 28.

The effects of the pinhole, penumbral and diffraction theories are incorporated within the Contact Screen itself.

When making an exposure through a Magenta Contact Screen the resulting halftone dot is formed directly by the amount and intensity of the light passing through the different zones of each vignetted dot comprising the Contact Screen.

Varying dot size in the resulting halftone image is determined by the extent to which the activating light rays will penetrate the increasing densities of the vignetted dot, to cause blackening of the silver salt in the negative emulsion.

Lens Controls and Stops

From the preceding descriptions it will be noted that no mention has been made of the lens and its effect upon the resulting image.

Here again it will be recalled that when a glass halftone screen is used, the resulting image dot formation is effected by the diaphragm stop size, and multiple exposures, *D*, Fig. 28.

With the Contact Screen a single diaphragm stop will suffice, because as has been previously stated, contrast is controlled by the use of specific filters. Dot size is determined by the amount of activating light rays passing through the screen. Consequently, the only function of the lens is to focus the camera for image size, and the stop used determines the amount of light to be projected.

Advantages of Contact Screens

Advantages in using contact screens can be summed up as follows:

(1) Being plastic, they are not as liable to break as is a glass screen.

(2) Less costly for original installation and replacement than is the glass screen.

(3) Subject detail is reproduced better.

(4) The dot shape takes the form of the detail.

(5) Finer screens can be used up to 300 line.

(6) Control contrast photographically by balancing exposures through color filters.

Fig. 28. ➡

A—Formation of the Sand Pile in this Fig. 28 is representative of the formation of the halftone dot as described in this Chapter XVI.

B—represents formation of a halftone dot by photographic exposure through a Variable Density Contact Screen. Light passing through the most transparent areas of the screen activates and effects the formation of a vignetted dot formation in the negative material.

C—The halftone dot represented in this diagram *C* is accomplished by photographic exposures through a glass cross-ruled screen. Indicated on the dot pictured in the lower section are the Flash dot in the center, encircled by concentric rings of diminishing light intensities. These rings are the second, third, fourth, etc., maximums. See *D* and *F*.

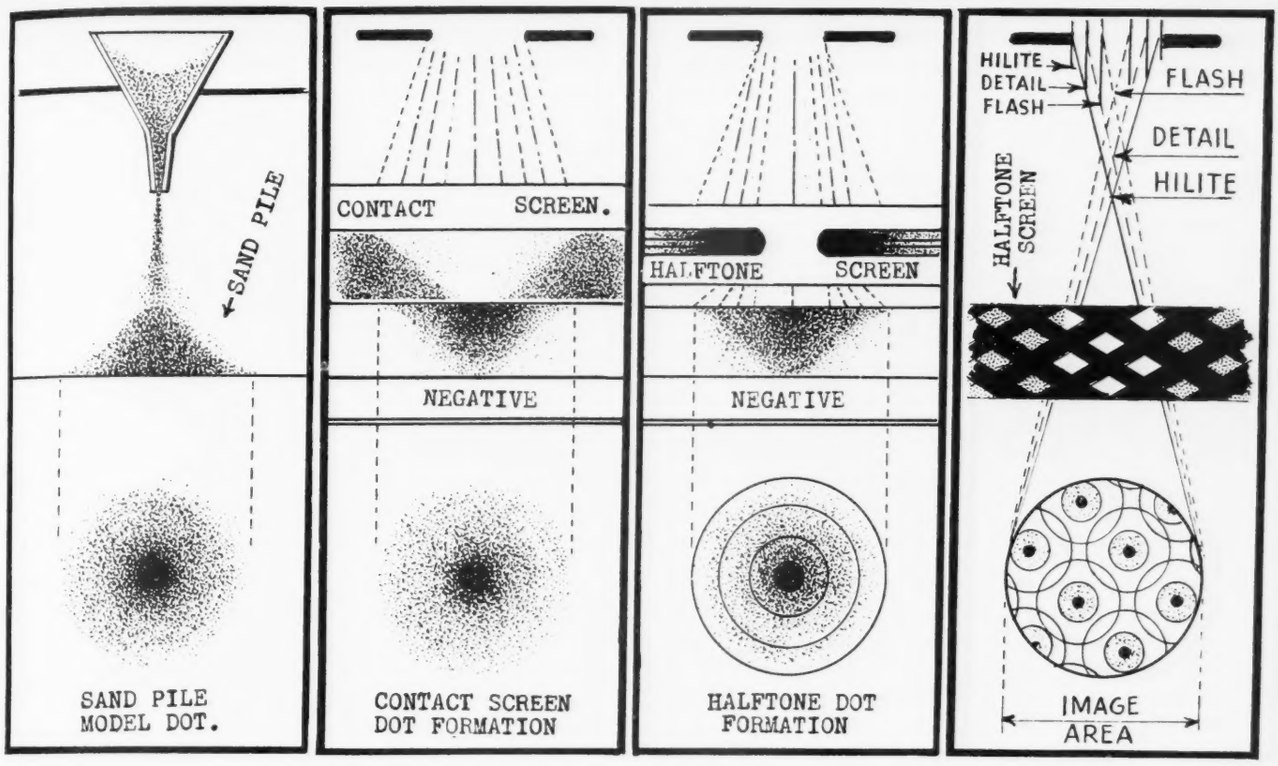
D—Representing a photographic exposure through a glass cross-ruled halftone screen. By multiple exposures through variable stop sizes, *i.e.*, Highlight, Detail and Flash openings. With each change in stop size, the light intensity and wave length is altered. Each opening in the halftone screen, performing like miniature lenses, duplicates in effect the reactions occuring with each diaphragm stop change. The Dots indicated within the image area circle represents the Flash Dot, encircled with the circles of light intensity of the first and second maximums (see *C* and *F*).

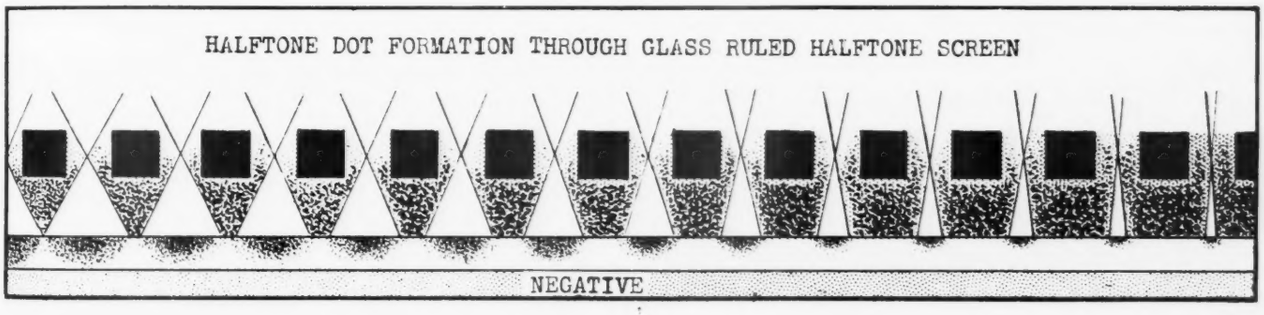
E—Illustrates the penumbral effect during exposure through a glass cross-ruled halftone screen. Note how the shadows are effected in proportion to the varying light intensities. An optical impression of the Gray Scale is created by the appearance of the activating light rays within the screen distance and shadow area, and is also evidenced by the relative dot formations within the negative emulsion.

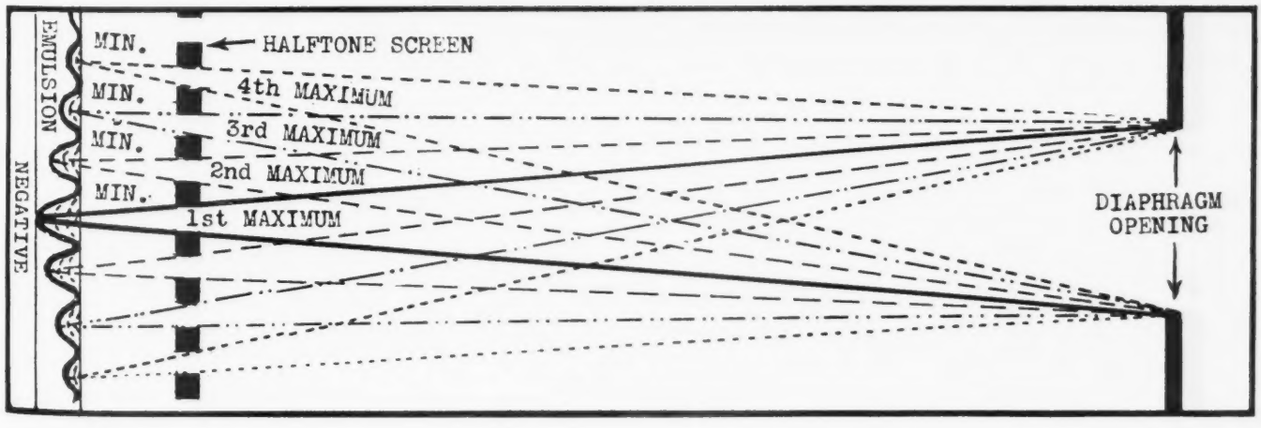
F—Represents the Diffraction theory as described in this Chapter XVI. The effects of the diffraction theory are explained as follows:

Minimums—Light rays from the edges of screen rulings are odd numbered multiples of ½ wave length apart and interfere with each other's intensity.

Maximums—Light from the edges of screen rulings are multiples of 1 wave length apart and add to each other's intensity. Maximum intensity behind each screen opening is sum of the first maximum plus second, third, fourth, and further coinciding maximums from other openings.







Disadvantages Of Contact Screens

Some of the most important disadvantages can be listed as follows:

(a) They are easily scratched and damaged in handling.

(b) Easily imprinted and embossed by the edges of negative materials.

(c) Easily damaged by disparities in humidity.

(d) Easily damaged by finger prints and similar defects.

(e) They cannot be used for direct color reproduction.

(f) Cannot be used for color correction or separation.

(g) Require more frequent replacement.

(h) More difficult to keep clean.

(i) For different screen angles a circular rotating copyboard must be part of the camera assembly.

(j) For color reproduction, extra operations are a necessity.

Color and the Contact Screens

If we study the advantages and disadvantages we note that there is no mention of Black and White photography. The reason is obvious. The Contact

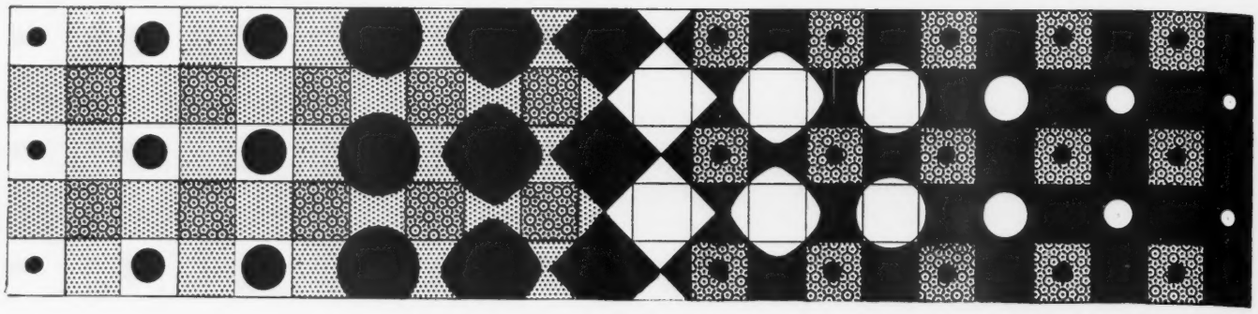


Fig. 29.—A composite representation of a halftone exposure and the resulting effects in dot formation.

The halftone screen grating is represented by the gray tinted cross ruling. Reading from left to right, the white areas surrounding the black dot formations represent the shadow area of the negative. In the center, where the black and white dots form a checkerboard pattern, a 50% tint is represented. Right of the center, the shaded tinted area surrounding the white dot formations represents the highlight areas of the negative. The change from black to white dot formations creates the optical appearance of the photographic gray scale. A Flash exposure is represented by the small black dots appearing in the screen openings. Since this exposure is made independently of exposures to the copy, the dot size will be uniform over all of the image area.

Screen is designed for Black and White photography only.

How then, can we use the Contact Screen in color photography?

Color separation and photography is determined and accomplished by the use of color filters and certain of the several different color sensitive photographic plates and films.

This means that to use a Contact Screen the several separations must be made on continuous tone negatives. These negatives must be color corrected by either photographic contact masks or by manual retouching.

Continuous tone negatives become the transparency copy which must be reproduced through the Contact Screen. This operation produces a halftone positive with a dot formation, *B*, Fig. 28, similar to the dot obtained when photographing through a glass cross-ruled halftone screen, *C*, Fig. 28.

Halftone Dot Construction

By comparison, the photographic effects obtained through the two different screens seem to create contradictions of fact.

Since halftone reproduction is dependent upon the halftone dot, its nature, quality, shape and opacity in the original negative or positive, let us study this insignificant but all important Halftone Dot.

Illustrated in Fig. 28 is a composite study of the halftone dot formation as obtained through a glass cross-ruled halftone screen (Fig. E). Here is pictured an overall inclusion of the effects resulting in a light-sensitive material after an exposure through the halftone screen grating.

To better understand the principles involved, let us take an individual dot for consideration.

If we take a glass funnel and fill the bowl with fine grained sand, *A*, Fig. 28, it will be observed that as the sand enters the funnel throat, it becomes more compact and dense. When the sand leaves the throat of the funnel and falls a given distance, we see that a spread of the stream is effected. The flow of sand is likened to a beam of light projected through a camera lens.

The shape of the pile of fallen sand is similar in the reverse, to the void occuring within the bowl of the funnel when the sand is discharged.

By studying the sand pile we observe that it is conical in shape, densest in the center, vignetting to a mere scattering of loose grains at the extreme periphery of the pile's base. This pile of sand is the model for the photographic halftone dot (when inverted).

We know that light-sensitive silver salts suspended in the gelatin emulsion, makes up the element which is photographically and chemically transformed from an invisible to a visible image of an object.

We know too, that a conic beam of light of variable intensities is the energizing and activating element which begins the transformation from silver salt to a blackened metallic silver image.

The projected beam of light spreads outward from the greatest intensity in the center of the beam through diminishing maxima into infinity, blending itself into darkness, *F*, Fig. 28.

Since the projected light is transmitted through a curved and rounded lens, it is obvious that where the light strikes the flat surface of the negative material the outer edges of the light beam are longer than is the core or center of the beam. To effect equal length of the entire light beam, it would be necessary to have an illuminated surface equal in curvature to that of the lens surface.

It is obvious that where the light beam strikes the flat surface of the negative material the light rays in the center of the illuminated circle will penetrate deeper into the emulsion than will the light rays at the outer edges of the light beam. *D* and *F*, Fig. 28.

In the Diffraction Theory, the halftone screen is considered as a diffraction grating. Light, passing through a small screen opening interferes with itself, projecting a central maximum (bright spot) surrounded by a series of concentric rings of diminishing light intensity, *C* and *D*, Fig. 28. These rings form the second, third, fourth, etc., maximums, *F*, Fig. 28.

By this theory, screen distance is correct when the second maximum from each screen opening is superimposed on the central (first) maximums of adjacent screen openings. The intensity of light falls off to a minimum between the openings as at *F*.

How a halftone dot is effected by camera exposure through a contact screen is illustrated in *C* and *E*, Fig. 28.

Here it will be noticed that the Contact Screen is, in effect, similar to the resulting halftone dot. Meaning that the dots of the screen are vignetted as is also the negative dot as at *B*, Fig. 28. The resulting halftone dot is illustrated in its similarity to the dot representing a pile of sand. There are no circles of diffraction indicated, because this effect is included in a contact screen. (See Halftone effects).

As previously stated, Dot size and Contrast are obtained by the length of time of the exposure and by the use of specially indicated color light filters, rather than by adjustment of varying stop sizes and multiple exposures.

Nomenclature

Core—The densest portion of a halftone dot, its center of density.

Halo—The outer rim or edge of a halftone dot, the thinnest or most transparent area of the dot.

Periphery—Same as Halo.

Ghost—A dot image which is weak, lacking density and incapable of withholding light. Dot is gray (not black), not clearly defined, translucent.

(*To Be Continued*)

Many of our production executive readers will respond to your Position Wanted Ad in the Classified Section of *Printing Equipment Engineer*. Rates on p.115

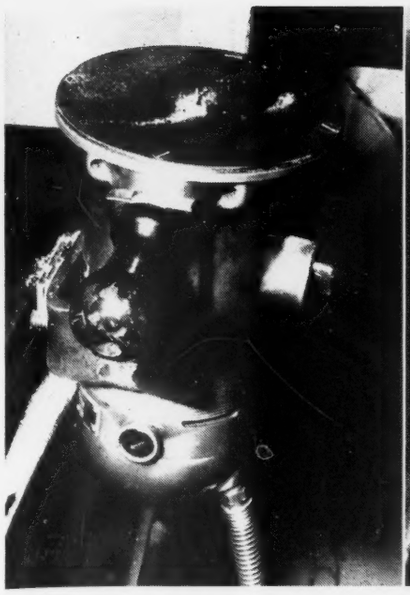


Fig. 1.—View of portable router modified to enable operator to mortise or cut out stereotype shell cast plates in a manner similar to that to which he is accustomed. Knobby handle on either side of the motor housing holds router securely in bracket (Fig. 2) which is fastened to any work table.

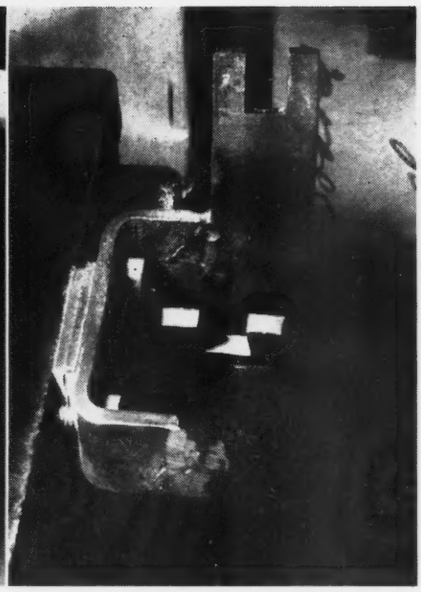


Fig. 2.—Bracket for holding portable router in inverted position on edge of work table top. The idea is attributed to Superintendent John (Mickey) Mahair of the Quincy (Ill.) *Herald-Whig*. A similar bracket and work top can be devised for other makes of portable routers when needed for the specific purpose of cutting or mortising spot illustrations in stereotype shell cast plates.

Portable Router Modified for Fixed Operation

A PORTABLE hand router has been converted into a fixed router in inverted position with work table top in the plant of the Quincy (Ill.) *Herald-Whig*. The device was developed by John (Mickey) Mahair, Plant Superintendent.

The modified router is used in the *Herald-Whig* stereotype department for outlining and/or dropping out irregular shaped illustrations, and circles, and for cutting inside and outside mortises in stereotype shell casts.

A special bracket was designed to hold the motor rigidly to the work table while in operation, Fig. 2. The bracket made for this particular Stanley S4A router is shown in Fig. 2. A bracket can be designed to accommodate the size and shape of other portable routers. A circular top plate (can be made any diameter) as illustrated in Fig. 1, is fastened to the top part of the router base. A chuck size was ordered so it would receive a Style 1A ($\frac{1}{16}$ in.) Royle router bit. The work top was drilled centrally with a hole just large enough to allow the bit to protrude about $\frac{3}{8}$ in. above the top surface of the plate. This prevents metal chips falling through and shorting out the motor.

While cutting or mortising shell casts, the cut is held face up on the round work table. An opening is made in the plate with the router bit. The cut is then moved counter-clockwise to provide a clean opening. For outlining such illustrations as shoes, dresses, borders and the like, the cut is moved clockwise to give a clean edge in the cut.

Mr. Mahair reports this device speeds up the cutting operations mentioned above as compared to using a saw for the same purpose.

Purchases Bindery

The T. J. Cardoza Co., San Francisco, claimed to be the largest commercial bindery in the West, was purchased recently by John G. and George L. Levison of that city. Founded in 1918, the company has been located since 1929 at 511 Howard St. Announcement was also made that T. J. Cardoza, founder of the firm, will retire from business.

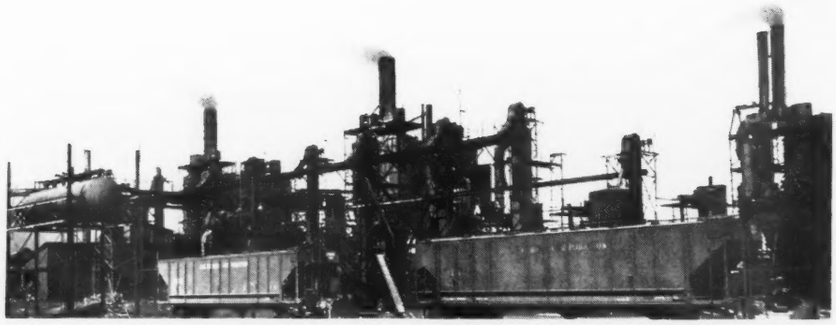
Craftsmen's Program

EARLY registrants at the 32nd annual Craftsmen's Convention in Boston, August 19-22, will be invited to participate in all-expense trips to two New England paper mills. These include a two day trip to the S. D. Warren paper mill in Maine and a tour of the Strathmore Paper Co. mill in Western Massachusetts. Plant visitations have been arranged with the Southern New Hampshire Typesetting Service and the Rumford Press in Concord, N. H. A point of interest in Boston for visiting Craftsmen will be the Mother Church of Christ Scientist, a religious and architectural showplace for world travelers, as well as its housing one of the world's most complete printing plants. Other convention features including an opening get-together cocktail party Sunday afternoon and a moonlight sail around historic Boston Harbor.

Solders Glass to Metal

General Electric Co. engineers can solder glass to metal in a process which, it is claimed, makes a bond stronger than the glass itself. The glass and metal areas to be soldered are painted with a thin layer of titanium hydride, and solder is placed upon both painted areas. The parts are placed together and then heated under a vacuum. When the temperature reaches about 900 deg. F., the titanium hydride decomposes. This causes the solder, which has already become molten, to adhere to the titanium-painted areas of both glass and metal. A strong, tight bond is formed upon cooling. Suggested possible applications of the process are in the manufacture of transformers, capacitors and electric motors.

Auto Stitcher Installation—Shown above is a Rosback Auto Stitcher, installed and operating in the plant of Sterling Printing Corp., Chicago. Pictured with the machine from left to right are: Arthur Held, E. P. Lawson Co., distributors of the machine; Walter Coburn, Sterling Printing Corp.; E. N. Grange of the Lawson company; and Mary Beth Shay of the Sterling company.



Dustless pelletized blacks are carried by enclosed conveyors into an overhead storage bin and are loaded by gravity feed into sealed hopper cars at J. M. Huber Corp.'s Borger (Tex.) plant for shipment to the company's ink manufacturing plants. Bulk handling of carbon black from the factory through the entire newspaper ink-making procedure is designed to assure a uniform product.

Automatic Processing Equipment Employed at Huber's New McCook (Ill.) Newspaper Ink Manufacturing Plant

J. M. HUBER CORP.'s new McCook (Ill.) plant, just outside Chicago is designed to insure year-round uniform quality of news black ink. Here, Huber-developed manufacturing processes permit bulk handling of incoming raw materials and bulk production of finished inks. Bottling up the raw materials in automatic processing equipment is said to result in contamination-free, as well as uniformly consistent quality of news black.

Huber engineers and production men tackled the problem at the three levels discussed below. Bulk handling and accurate, automatic controls over raw materials and finished inks are the keystones of the process.

1.—Size and Control of Storage Facilities.—Adjacent to the McCook plant is an extensive tank farm (Fig. 1). Here raw materials can be stored in carload quantities. Carbon black, for example, is stored in a five-carload roof bin, (Fig. 2). Carbon black is conveyed to the top of the manufacturing plant in the enclosed bucket elevator shown in the illustration. Incoming raw materials are carefully checked against Huber standards (Fig. 3).

A series of storage tanks in the plant (Fig. 4) accommodates the finished inks. Different grades are stored separately under controlled, continual agitation in heated rooms. These large storage facilities allow Huber to age its inks and to deliver a more homogeneous product. The tanks are piped so that the contents of one can readily be transferred to any tank in the room. The large hatches are used for observation and gauging.

2.—Size and Control of Raw Materials.—Large storage capacity permits the McCook plant to handle carload lots of raw materials. Carbon black from Huber's Borger (Tex.) plant arrives in sealed hopper cars and is automatically conveyed by enclosed bucket elevators to the roof storage tank (Fig. 2). Liquid ingredients are stored in holding tanks before being piped to the plant.

3.—Size and Control of Manufacturing Processes.—At McCook Huber has made production a continuous, automatic process. Automatic controls throughout all phases of news black manufacture minimize sources of human error. Carbon black is automatically weighed within an accuracy of 1% and dropped into ball mills (Fig. 5), while the remaining ingredients are piped into the mills from other sections of the plant. The hopper scale is used to weigh carbon black dropped from the storage tank by dust-tight gravity feed. This scale rides along an overhead trolley to positions directly above the ball mills.

McCook is also a large producer of other inks. A weighing scale (right foreground, Fig. 6) measures raw materials prior to pumping to the blenders in the center of the picture. Countless newspaper comic sections as well as comic books are printed with Huber colored inks. The processing of these inks follows the same methods used in the manufacture of Huber news black. Comic inks are bulk handled into storage (Fig. 7) to await delivery by Huber multi-color tank trucks (Fig. 8). These trucks pipe inks directly into pressroom storage tanks which in turn pipe the inks directly to the press fountains in a circulating hookup. This eliminates drum handling and manually feeding fountains.

An executive of Huber states the company's fleet of tank trucks operating out of McCook covers 11 midwest states and rolls up enough mileage each year to circle the globe 10 times.

Designed to turn out upwards of 30 million lbs. of ink annually, McCook also produces inks for printing magazines, bags, cartons and containers.

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PRINTING
J. M. HUBE

Equipment & Supplies

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT *Engineer*, 1276 West Third St., Cleveland 13, Ohio.

When writing to us about any of the items described, and to save your time, just mention in your request the PEE symbol which appears at the end of each description.

Automatic Stereotype Metal Pump

THE International Electro - Pressure Automatic Stereotype Metal Pump, states International Newspaper Supply Corp., is designed for casting (1) Flat shell, (2) Type high, (3) Tubular, semi-cylindrical and double-page plates, (4) Backing for electrotype shells, and (5) Non-stretch electrotype plate jackets. This pump is of the impeller push-type automatic pouring type.

The pump itself is contained within a suitable frame as shown in the accompanying illustration and the pump is mounted on a top edge of the metal pot in convenient location. The swivel pouring nozzle may be swung to the desired location above the casting box. Delivery of metal is regulated through an adjustable hand-lever which is operated to set in motion the metal pumping mechanism.

View of Electro-Pressure Automatic Stereotype Metal Pump. May be attached to existing or new pots. Means are provided for adjusting delivery of metal into casting box according to size of plate.

A ½ h.p. electric motor revolves impeller blades at the base of the pump at 1725 r.p.m. to deliver the flow of metal to the tubular pouring spout. The revolving impeller blades produce a gentle agitation of the molten metal to insure even distribution of the tin-antimony content.

The impeller blades and delivery gate are protected against corrosion and dross.

Manufacturer states the pump is designed for automatic pouring of metal alloys in wide quantity range from small shell thickness plates to double-newspaper page standard thickness curved plates.

It is also stated that casting efficiency remains 100% effective when the metal in the pot has been lowered to three-quarters of the pot capacity. Economy of fuel and metal is further implemented by means of a pot hood arrangement which makes it possible for at least one-third of the pot surface to be covered permanently. When writing for further details, please mention PEE No. 102.

Height of the pump equipment from top surface of the pot is 28 in.; width above the surface is 13¼ in.; length below (unless specified) is 18¾ in.; weight of the complete assembly is 140 lbs.

Miller Pocket Catalog

A POCKET catalog in which is contained specifications for six Miller automatic cylinder letterpress presses has been prepared by the Miller Printing Machinery Co. Each press included in the 20 page catalog is accompanied by an illustration, a list of standard equipment, specifications and approx. weights of the press. The cover for the 3⅜ in. by 6¼ in. catalog is printed in three colors. Miller presses included in the listings are the 19 in. by 25 in. SG Automatic, 21 in. by 28 in. SW Single Color, 27 in. by 41 in. SY Single Color, 21 in. by 28 in. TW Two-Color, 27 in. by 41 in. TY Two-Color, and 28 in. by 41 in. CY Cutter and Creaser. If a copy of this bulletin is desired, please mention PEE No. 88 in your request.

Unitaire Conditioner Booklet

A COLORFUL illustrated, 12 p. booklet in which is described the benefits of air conditioning in almost any type of installation is available through Westinghouse. For a copy of the booklet, please mention PEE No. 87 in your request.

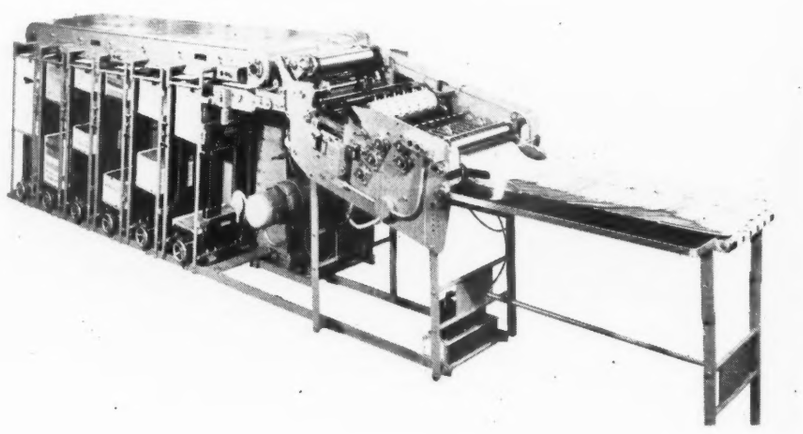
Pearce Automatic Collator

THE Pearce Automatic Collator is designed especially for the gathering of printed sheets for form printing, carbon interleaved forms, calendar pads, price lists, booklets, signatures, and other gathering work done by the commercial printer. The collator, built by the Pearce Development Co. and distributed by Orville Dutro & Son, Inc., is of the in-line type with positive gripper mechanism.

Each unit of the machine has reloading stations which permits loading while the machine is in operation and an uninterrupted flow of work. The stations are equipped with electrical devices that will stop the machine if a product is picked up or if a miss occurs at any station.

A jogging device on the collator is designed for close register and a calipering device measures the thickness of the completed product prior to delivery onto a creeper belt. The machine includes a gumming attachment that provides an internal tipping on the number of parts being processed. Provisions are made for removal of gumming strips to preclude the gumming on any part of a collated set being delivered.

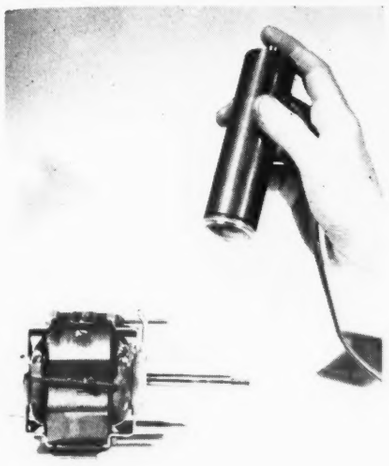
Shear slitters are also incorporated on the machine so that a form printed from two to five up can be cut down with the end result that the product being delivered is ready for packaging. Max. size product handled by the Pearce Collator is 18 in. by 12½ in.; min. size is 4 in. by 4 in. When writing for further details, please mention PEE No. 92.



The Pearce Automatic Collator for gathering printed sheets for form printing, carbon interleaved forms, calendar pads, price lists, booklets, signatures, and other gathering work done by the commercial printer.

Portable Stroboscope

THE Synchroscope Company has announced a portable, flashlight-type stroboscope capable of indicating synchronous speeds. The instrument is designed for production and laboratory testing, as well as field servicing, of synchronous motors, time switches, tim-



ing devices, generators, and any other device that utilizes synchronous speeds. Operating like a flashlight with a button switch, sponsor states the Synchroscope provides an instantaneous light source for instant reading.

The instrument utilizes an electronic cold cathode triode tube which rectifies the line source and gives off a pulse of light only during the positive portion of the a.c. cycle. It is claimed the visual pulse per cycle stroboscopically stops the motion of a synchronous motor or device that is operating in synchronism with the line frequency. Specifications of the instrument are as follows: diameter, 1 1/2 in.; length, 5 in.; weight, approx. 5 oz. Further details may be obtained by mentioning PEE No. 77 in your request.

New Monotype Mold

LANSTON Monotype Machine Co. recently began manufacture of a special purpose mold for use on the Monotype Giant Caster. The first style is a mold in which may be cast solid (not cored) base, measuring 0.853 in. high and 0.763 in. pointwise. When used as basing material "right side up", the base measures 0.853 in. for use under 16 ga. (0.065 in.) zinc and/or copper photoengravings. When used on its side, the base measures 0.763 in. for use under stereo shell casts and electrotypes (0.155 in. thick). The base can be cast to any desired measure, that is, 1 col., 2 col., and so on.

The other style mold differs from the one described in the pointwise dimension which is 0.768 in. thick for mounting 0.150 in. plates. The height of the first style mold, however, is the same as the first, that is, 0.853 in. high.

Please mention PEE No. 86 when requesting further information.

Back-Up Board

BACK-UP Board is used with 18 ga. (0.049 in.) zinc to replace 06 ga. (0.065 in.) zinc for newspaper and commercial printing plants, according to an announcement by Eastern Newspaper Supply, Inc. The method consists of applying a 0.015 in. Back-Up Board to 18 ga. zinc by means of one of several types of adhesives. Eastern's new product is characterized by a hard, brittle quality and the proper firmness. It is claimed that these characteristics permit illustrations to be cut out of the built up zinc flat with only minor burrs which can easily be removed. It is pointed out by the sponsor that a build up of 18 ga. zinc in conjunction with the proper area of Back-Up Board also permits the use of both 18 ga. and 16 ga. zinc on the same height basis. Additional information is available by mentioning PEE No. 76 in your request.

Concentrated Wonder Spray

RECENTLY announced by Wild & Stevens, Inc., is that company's Wonder Spray Offset Solution for preventing offset on freshly printed sheets. The solution is packed in concentrated form in 1, 5 and 55 gal. cans. The spray is mixed in the pressroom in the quantity needed to fit each press run. When asking for additional information, please mention PEE No. 80.

Redesigned Printing Press Controls

A COMPLETELY redesigned line of a.c. preset-speed printing press controls in ratings through 15 h.p. has been announced by the General Electric Co.'s Control Div.

For primary and secondary control of wound-rotor induction motors, the new line is suitable for practically every printing application and is available in both reversing and nonreversing forms. Nonreversing forms are used on flatbed presses, tin plate presses, waxing machines, intaglio presses, large cylinder presses, and the like. Reversing forms are used on offset presses and automatic cylinder presses.

Control functions of the new devices are: Start, jog, (jog-reverse), stop, and fast-slow. Undervoltage and overload protection are provided.

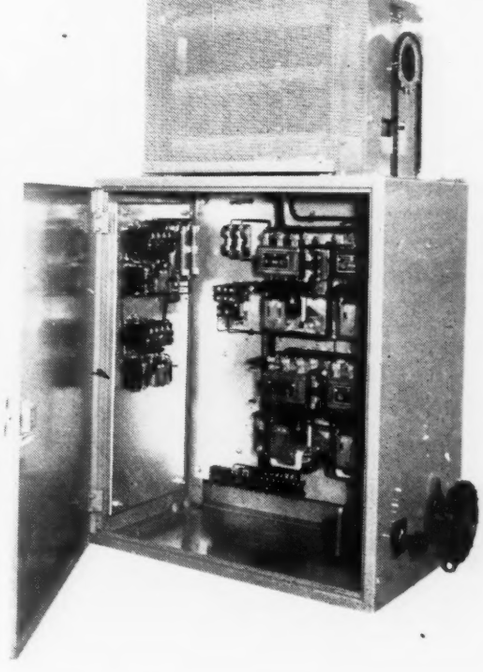
The controller consists of a magnetic control in a dead-front steel enclosure on top of which is mounted a totally-enclosed plate-type rheostat. This arrangement is said to contribute to longer life of the device by removing all heat from within the enclosure. All connections are made from the front, and conduit runs are reduced because fused starters for feeder and delivery motors may also be mounted inside the main controller.

Very fine settings are possible because the rheostat provides 50 to 70 points of speed adjustment. Operating adjustments are simple and can be made from outside the control enclosure.

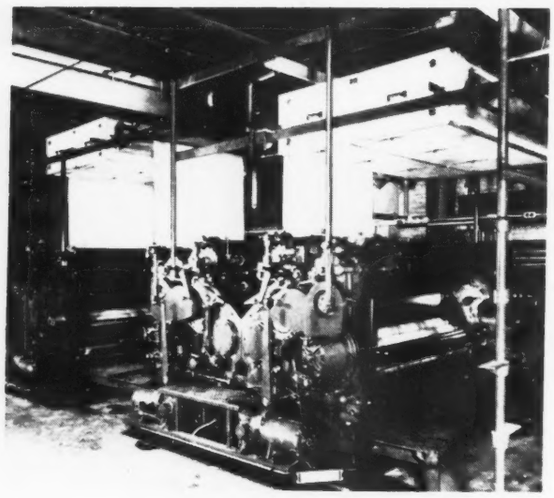
For remote operation, a motor-operated mechanism is mounted on the rheostat and speed can be adjusted by any number of pushbutton stations installed at convenient locations about the press. Expensive master stations are unnecessary.

The controllers are rated 15 h.p. (max.), 550 v. (max.), 220 v. control, 60 cy. They measure approximately 52 in. high, 29 in. wide, and 19 in. deep.

When writing for further information, please mention PEE No. 96 in your request.



View of G-E Printing Press Preset Speed Controller. Totally enclosed plate type rheostat is mounted atop the enclosure to eliminate all heat from within the enclosure. Made in nonreversing and reversing forms.



Herbert Infra-red Drying Oven in operation on a Webendorfer offset web press. When the press is stopped the heating units are moved away from the paper web and the oven vent doors open automatically.

Web Press Infra-Red Drying Oven

HERBERT Products Inc. has developed an Automatic Drying Oven for flash-drying on high-speed web presses.

The Herbert Oven delivers heat from reflector-type heating units whose surface temperatures are 1400 deg. F. Oven heat is adjustable within a 350 deg. differential. Thermostatic control automatically maintains desired temperatures to within a few degrees.

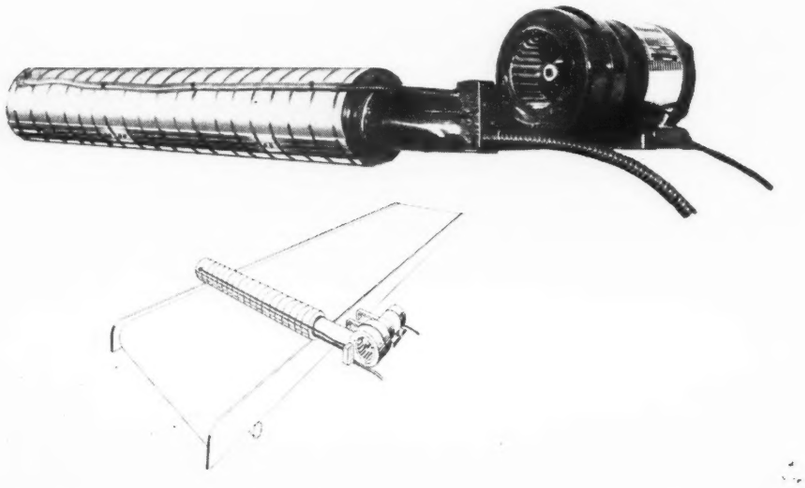
Danger of scorching or weakening the web, states sponsor, is eliminated because in the design of the oven provision is made for automatically moving the heating units away from the web and opening the vent doors when the press is stopped. This permits immediate heat escape from the oven. Accumulated fumes are collected and are drawn off by an exhaust system at the end of the oven, itself.

Positive mechanical linkage with adjustable connections controls the operation of the vent doors and heaters. Physical shape and size of the oven permit installation in spaces where drying length is confined.

Power for automatic control of operation is obtained from any available compressed air supply. A solenoid valve connected to the press motor control circuit regulates the admission of air to the pneumatic system. The speed at which the vent doors open and close is adjustable. There is no drain put on the regular air supply because it is only used when actuating the mechanism.

All heating elements are steel encased to eliminate oxidation or damage. Either A.C. or D.C. current can be used.

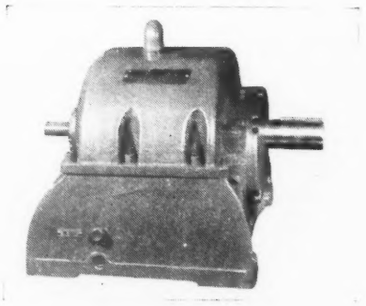
When requesting further information, please mention PEE No. 83.



Heat Blower for Printing Presses—An electric heat blower unit for use on printing presses, conveyor belts and other applications in the drying or preheating of products or materials, is reported by Master Appliance Mfg. Co. The unit blows heated air from an opening ¼ in. high and 36 in. long. The air is heated to 400 deg. F. at the outlet and forced out at the rate of 4800 ft. air velocity per min. It is claimed that the heat blower is designed so that even temperatures and pressure are achieved throughout the length of the blower. The unit was originally developed for the H. H. Heinrich Co. for use in the printing industry. The Mamco Heat Blower shown above operates on 220 v., 40 amps. Air supply is developed by an electric motor driven blower and heat is developed by electrical heating elements. Other sizes are available. Additional details may be obtained by mentioning PEE No. 72 in your request.

Automatic Stream Feeder

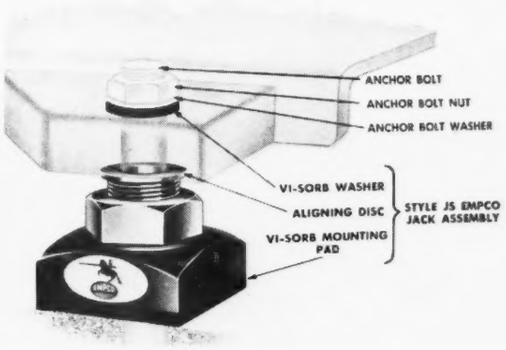
THE Elless Automatic Stream Feeder will handle all types of stock from onion skin to heavy board, as well as tin, according to Turner Printing Machinery, Inc. The Swedish made feeders are designed for all Miehle two revolution single color presses, Miehle two color presses, Miehle perfector presses, and most Babcock cylinder presses. Accessories for the feeder include a reloading device which permits a second lift to be loaded on the feeder while another lift is being fed, a power lift, and an extended feed board, making it possible to bring in a form truck between the press and feeder. In operation, sheets are separated and forwarded from the back edge of the pile. The feeder is supported by a framework built on the cantilever principle by which no rear legs are necessary. Please mention PEE No. 91 in your request for additional information.



Speed Reducers—Type DB Double-Reduction Speed Reducers are designed for applications on small to medium size drives where the prime mover is coupled or belted to the gear unit, according to Westinghouse Electric Corp. Available in ratings from 1 to 100 h.p., the speed reducers use all-external type helical gearing, arranged in a horizontal plane. When coupled to an electric motor, a straight-line drive results. Eight unit sizes are available; 12 standard gear ratios range from 6.25 to 58.3:1. Please mention PEE No. 75 when writing for further details.

Air Conditioning Booklet

A 24 page planning guide for industrial air conditioning, printed in two colors, has been prepared by Westinghouse Electric Corp. It is explained in the booklet that an air conditioning system should control temperature, control humidity, clean air, circulate air, and blend outside air with recirculated air. Other parts of the planning guide deal with the components needed to perform the job of air conditioning, what to expect from an air conditioning system, and factors to consider when planning a system. Where and when to use a "within-the-space" conditioner, a factory assembled central plant type unit, or a field assembled system is also covered. Illustrations of each kind of equipment are included along with photographs of interiors where these are installed. For additional information, mention PEE No. 61 in your request.



Empco Leveling Jack is said to support 20 T. and will lift 8 thousand lbs. without overexertion on the wrench. Made in three heights. Vi-Sorb mounting pads for eliminating vibration are available in various thicknesses.

Machine Leveling Jack

THE Empco Leveling Jack has been announced by the Enterprise Machine Parts Corp. It is stated this jack (Style JS) will support 20 T. and lift 8 thousand lbs. without overexertion on the wrench. The jack vertically raises or lowers by turning the adjusting nut to right or left.

Anchor bolt hole through the jack assembly allows clearance for $^3/_4$ in. diam. bolt, making it possible for the Jack to be located at the precise point where equipment was designed to be best supported.

To compensate for uneven floors, the top of lift screw carries a concave spherical radius into which glides the convex spherical radius on the bottom face of the aligning disk.

Vi-Sorb mounting pads are available in $^1/_4$ in. thicknesses up to 1 in. These pads are cut to fit the under part of jack base. The jacks are all supplied with $^3/_8$ in. leveling adjustment and are furnished in three heights. Height of lowest jack assembly is $1^3/_4$ in. min. to $2^1/_8$ in. max. Next size is 2 in. to $2^3/_8$ in. and the third size is 3 in. to $3^3/_8$ in. high. These dimensions do not include mounting pads.

When writing for further information, please mention PEE No. 85 in your request.

Slitter and Rewinder

ILLUSTRATIONS and descriptions of operating features of the Beck Razor Blade Slitter and Rewinder are included in an eight page bulletin available from the Charles Beck Machine Corp. The machine is designed for slitting and rewinding cellophane, acetate, plastics, foil laminates, and other fine materials. It is stated in the bulletin that web squaring adjustment and a side-wise adjustment overcomes unevenly wound rolls at the edges and uneven tension on parent rolls. Specifications of the machine are listed. Beck Slitter and Rewinder attachments, such as a built-in motor drive, static eliminators, trim blower, yardage counter, etc., are also described in the bulletin. For a copy of this literature please mention PEE No. 79 in your request.

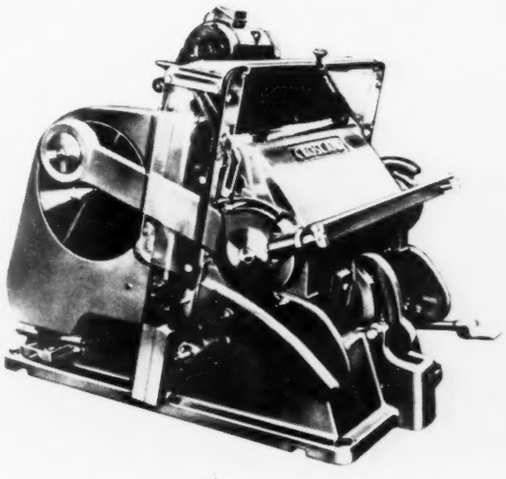
Key-Rite Bulletin

A FOUR page two-color bulletin, $5^3/_{16}$ in. by $8^1/_8$ in. size contains technical information about the Key-Rite method of ink control on cylinder and offset printing presses. In addition to the benefits to be derived from use of the device, such as exact control of the fountain mechanism, simplified instructions for installing the device on presses are included. Through use of the Key-Rite Fountain Key Dial System, the screws are calibrated so that each can be adjusted accurately without mental computation. Please mention PEE No. 82 when asking for further information.

Paper Roll Trucks

NEW model trucks designed for handling heavy rolls of paper in newspaper and commercial printing plants, warehouses and mills are illustrated and described in an eight page bulletin issued by Elwell-Parker Electric Co. Featured are high-lift clamp trucks, with summaries of case studies giving data on speed of operation, utilizing overhead storage areas and savings in avoidance of damage to paper. Facts relating to rotary apron-type roll handlers are also included in the bulletin. This bulletin may be obtained by mentioning PEE No. 78 in your request.

Embossing Press — The Crosland Cutting, Creasing and Embossing Press, as reported by Hambro Machinery Div., will cut, score, crease, perforate and cold emboss in one operation. The machine is available in four sizes: 15 in. by 24 in., 22 in. by 30 in., 23 in. by 35 in., and 30 in. by 41 in. The Crosland Press is equipped with variable speed drive, double reduction gearing, improved brake arrangement, single impression catch, and impression adjustment. Mention PEE No. 51 in your request for further information.



pH Control

THE ninth edition of *Modern pH and Chlorine Control* has been announced by W. A. Taylor & Co. Size of the booklet is 5 in. by $7^3/_4$ in. There are 100 pages with illustrations. There is considerable valuable information in this booklet with respect to pH control in the Graphic Arts industry. The explanation in *Meaning of pH Control* is clear and concise. Among the specific applications in the Graphic Arts industry are air conditioning, electroplating and electrotyping, lithography, pulp and paper and water treatment. Taylor equipments for tests are illustrated and described. Please mention PEE No. 98 when asking for the booklet.

Magazine Enveloping Machine

THE Craig Kemp Enveloping Machine is designed for automatically inserting magazines, books, catalogs, circulars, etc., in envelopes, according to Hambro Machinery Div. Sponsor states the machine will handle magazines or catalogs of any normal thickness and up to a max. size of 9 in. by 11 in. Rated speed is 2000 books inserted per hr.

In operation, the machine may be reloaded without stopping or slowing down. A reciprocating inserting hand picks up a book from one hopper and inserts it into an envelope which is opened by a pneumatic system in the adjacent hopper. The envelope is then pushed out and delivered down a chute. A sealing attachment is available with the machine which will automatically seal down the flaps of the envelopes as they come from the filling operation.

Several copies of different printed matter may be inserted by the machine at one time, but must first be precollated and then fed into the machine by hand. Specifications are as follows: length, 80 in.; width, 21 in.; height, 44 in.; sealing attachment increases length by 3 ft.; weight, 300 lbs.; motor, $^1/_3$ h.p. If additional information is required, please mention PEE No. 84 in your request.

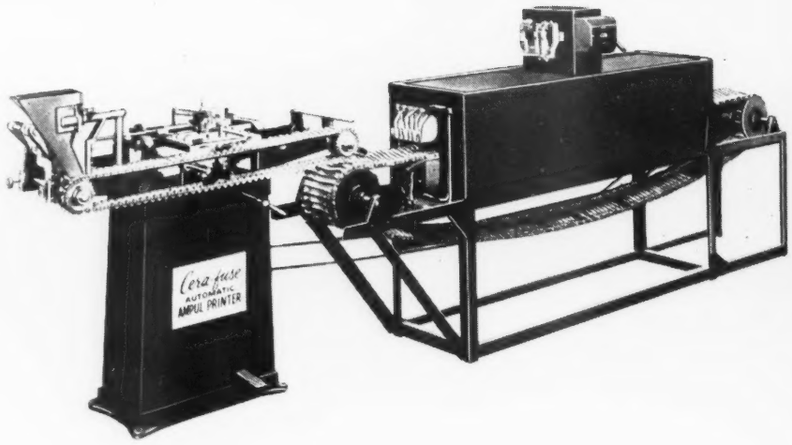
Silk Screen Ampul Printer

THE Cera-fuse Automatic High Speed Ampul Printer, states an executive of Ceragraphic, Inc., designed to print by silk screen method and in an immediately following operation fuse the ceramic enamel permanently to glass ampuls, vials, carpuls, rods, droppers and miscellaneous glass tubes. Also, without employing the high temperature conveyor furnace, it can be used for printing small plastic, metal or wood articles.

It is stated that the entire printing process, consisting of feeding stock to the machine, inking and inspecting can be performed by one operator to produce 3 thousand to 5 thousand ampuls per hr. The machine may be adjusted in less than $\frac{1}{2}$ hr. to print any ampul, 25 or 30 mm. to 150 mm. long.

The Cera-fuse Printer consists of two units, as shown in the accompanying illustration, (1) An automatic one-color silk screen printing unit, and (2) A small conveyor furnace which carries an 110 deg. F. temperature to fuse the ceramic enamel permanently to the glass surface.

This equipment is manufactured by Machines Dubuit of Paris, France, and is distributed exclusively in the United States by Ceragraphic, Inc. It is also announced that Ceragraphic, Inc. will make all printing screens to the specifications required within one week from date of receipt of order.



View of Cera-fuse Automatic High Speed Silk Screen Printer. Consists of two units—the silk screen printer and high temperature conveyor type ceramic enamel fusing oven. May be used for printing glass ampuls (sponsor claims from 3 to 5 thousand per hr.) and other glass objects; without the oven, this equipment may be used for printing small plastic, metal or wood articles.

Specifications: Weight of printing unit, approx. 250 lbs.; overall dimensions, approx. 4 ft. 2 in. long by 2 ft. 1 in. wide by 4 ft. $1\frac{1}{2}$ in. high; continuous furnace, electric Lehr unit, weight, approx. 725 lbs.; overall dimensions, approx. $9\frac{1}{2}$ ft. long by 1 ft. $8\frac{1}{4}$ in. wide by 3 ft. 4 in. high; overall length, 12 ft. 11 in. For further information please mention PEE No. 81 in your request.

Xerography Camera

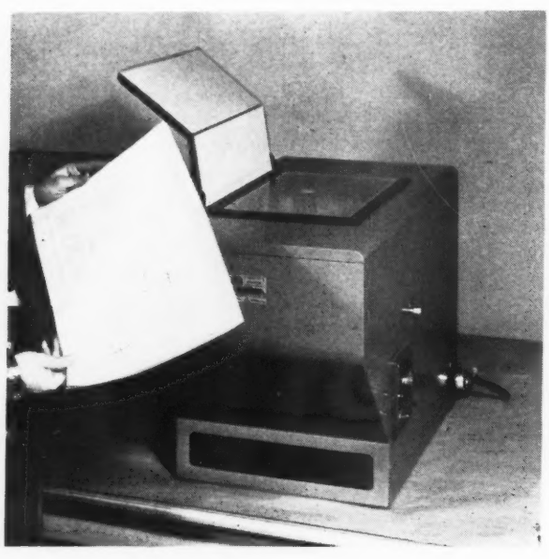
IT IS claimed that the image of an office form, engineering drawing, letter, chart or report can be copied on to a paper master plate in one minute by utilizing the Xerography Camera announced by The Haloid Co. The paper master is then placed on the cylinder of a Multilith process duplicator and multiple copies run off. The combined operations take less than two minutes, states sponsor.

Xerography is a dry, direct positive, electrostatic reproduction process. A black resinous powder cascaded over the electrostatic surface of the specially treated Xerographic plate produces the printing image on the plate. (A description of the Xerographic process appeared in the November 1948 issue of *Printing Equipment Engineer*.)

After the paper master has been made, the latent image may be removed from the Xerographic plate in a few seconds. Sponsor reports that the same plate may be used hundreds of times before it requires reprocessing.

The XeroX camera has a fixed focus extreme wide angle lens. This permits copying subjects on to paper masters with images on both sides of the page. Paper masters are then processed in the XeroX Copier. The powdered image areas on the surface are made permanent by placing in the fusing unit for a few seconds. It is claimed that thousands of copies can then be run from the paper master plate.

The equipment consists of three units which can be located on a 3 ft. by 5 ft. table. Each unit plugs into an a.c. outlet. If additional information is required, please mention PEE No. 90 in your request.



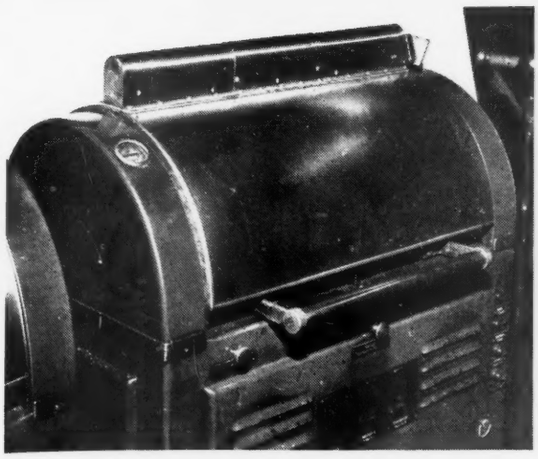
Xerography camera which copies existing or revised office forms and engineering drawings on to a paper master plate for multiple reproduction in one minute's time. The process, which eliminates negatives, uses electricity and powders instead of ink, film, sensitized paper or chemicals.

Bulb Marking Changed

TO permit users to identify the wattage of its light bulbs more easily, General Electric Co. has adopted a new marking design for bulbs of 15 w. to 100 w. The new design displays the lamp's wattage in the center of the marking, replacing the G-E monogram in that location. The revised marking was undertaken first on 75 w. bulbs, and is being adopted on other lamp sizes as rapidly as possible, according to the company. Additional information may be obtained by mentioning PEE No. 69 in your request.

Bearing Manual

THE 270 page manual *Ball and Roller Bearing Engineering* is available from SKF Industries, Inc., to maintenance men, engineers, product designers and engineering students. The text covers in technical detail such subjects as bearing types and nomenclature, capacities, selection, design, installation, maintenance, causes of failures, and load calculations. Copies are offered to interest individuals in the United States at $1.75 each. In your request, please mention PEE No. 93.



View of Shrinkmaster Stereotype Mat Pre-shrinker which is mounted on top the cover of any Sta-Hi Masterformer. When mat has been preshrunk the desired dimension, a micro-switch actuates a relay which causes the full vacuum to be applied to the mat.

Shrinkmaster Pre-shrinker

THE Shrinkmaster Co. has developed a pre-shrinkage control for stereotype dry mats. The device is attached to the top of the cover of any Sta-hi Masterformer. To explain the purpose and utility of the Shrinkmaster, it is stated that dry mats molded from solid type pages require longer pre-shrinking than do dry mats of the same moisture content molded from open pages. For example, a solid type page may require as much as 50 sec. of pre-shrinking, while an open page will require a pre-shrinkage time of 5 sec. to obtain the same mat shrinkage. Irrespective of how many seconds a dry mat is pre-shrunk in a Sta-hi Masterformer, the overall time, from the time the cover is closed until the scorching time is completed remains the same.

The Shrinkmaster can be set for any pre-determined width and the pre-shrink cycle will only be in operation until the molded dry mat shrinks to this pre-determined width, at which time the full vacuum cycle will be automatically set in operation.

As will be seen in the accompanying illustration, the Shrinkmaster is attached to the cover of the Sta-Hi Masterformer. A leg on each side projects through each side of the stainless steel cover, then through the baffle plates and the vacuum perforated plate on the inside of the cover. A shoe fits each of the legs inside of the vacuum perforated plate. In turn, these shoes engage each side of the molded dry mat as it is placed in the Sta-Hi machine. After the Sta-Hi cover is closed in the usual way, the pre-shrink control rod at the left front side of the Sta-Hi is set to register no more than 1½ in. of pre-shrink vacuum. From this point on, the Shrinkmaster is automatic. As soon as the dry mat shrinks to the set width, a micro-switch actuates a relay which supplies the full vacuum of at least 5 in. As soon as the overall timing cycle is completed, the Sta-Hi cover will open in the usual way.

Sponsor states that molded dry mats can be trimmed for width and length in the usual way. Where Autoplate casting equipment is used, molded dry mats can be trimmed on the cut-off beads, or with a wider bolster on the tail side of the mat if desired. Sponsor further states that if mats are trimmed on the cutoff beads on each side of the molded mat it does not matter if the page is made up its full width or not, as the Shrinkmaster will compensate for this variation.

When requesting literature, further information and/or price, please mention PEE No. 89.

Hamilton Catalog

CATALOG No. 27 has been published by Hamilton Mfg. Co. In it are illustrated and described the equipments manufactured by Hamilton—type cabinets, imposing tables, galley cabinets and galleys; page, form and makeup trucks; work benches, storage and furniture cabinets, furniture and reglet and cabinets, and miscellaneous equipment. The 200 page catalog is divided into nine major divisions, thumb-indexed for user convenience. Catalog size is 8½ in. by 11 in.

Among the features of the catalog which are of value to the plant production and/or mechanical executive are a number of pages which bring out through illustration and copy a few of the faulty situations which are found in many composing rooms. Several pages are utilized to outline the need for and the advantages of proper composing room layout, and give the fundamentals of proper layout.

Advantages of the unit assembly system in composing room equipment are explained. Under each product illustration the specifications are grouped; these may be used in planning for new equipment.

Illustrated also is Hamilton's new line of fluorescent lighting fixtures which may be obtained with the equipment illustrated and described in the catalog.

When requesting a copy of this catalog please mention PEE No. 99.

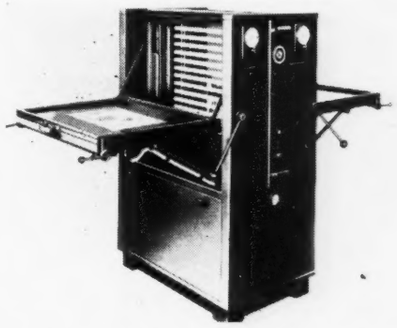
Industrial Lighting Booklet

A 16-page lighting-at-work booklet on industrial lighting is available from the Westinghouse Electric Corp. Aimed at the industrial plant operator, three ways in which better lighting can work for him are stressed: (1) It can cut cost by making possible increased production; (2) Increase efficiency by ensuring accuracy; (3) Reduce accidents by exposing dangerous operations. In this booklet are analyzed three light sources (fluorescent, mercury vapor, incandescent) as to type of light, efficiency, lamp life, maintenance, mounting height, and job suitability. Illustrations of various luminaires of each type of lighting are presented along with wattage and lumen output ratings.

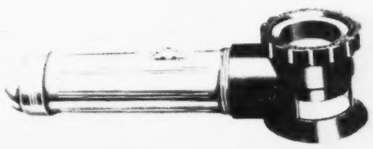
For a copy of booklet B-4727, please mention PEE No. 94 in your request.

Twin Vacuum Frame Cabinet

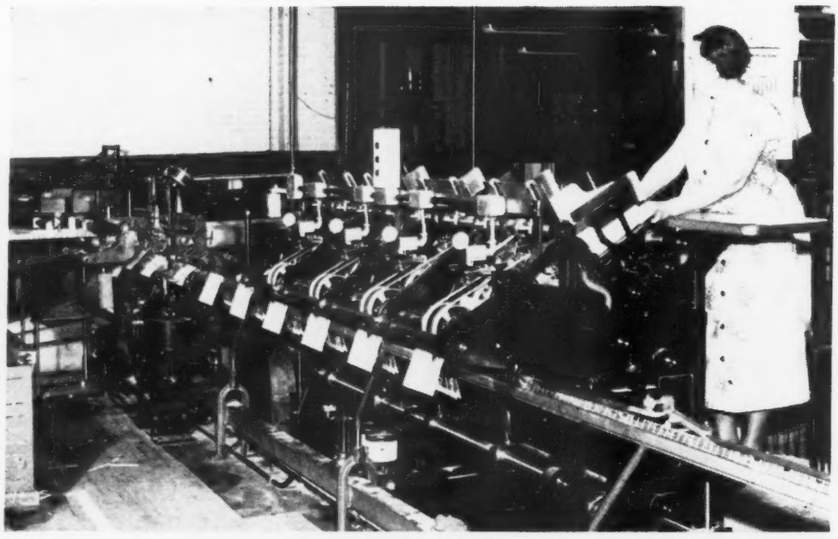
THE Bikomat, shown in the accompanying illustration, is a twin vacuum frame cabinet with fluorescent lighting. Made by Klimsch & Co., it is imported by Amsterdam Continental



Types and Graphic Equipment, Inc. Two plates may be exposed simultaneously. Each of the two frames is 20 in. by 24 in.; the sliding shutter is regulated by a control clock; the locking lever for the frames is coupled with the control valve of the vacuum unit. When asking for further information, please mention PEE No. 95 in your request.



Magnifier Spotlight — The improved Flash-O-Lens combines a 7 power magnifying glass with a light built into the handle that illuminates the magnified field of vision without throwing direct rays in the user's eyes. The portable instrument, announced by Abbeon Supply Co., is designed for use by engravers, lithographers and printers in examining plates and printed matter. Housing for a Bausch & Lomb lens system in the improved model is made of Bakelite. The case containing standard dry cell batteries is constructed of steel with chrome finish. The instrument measures about 1 in. longer than a standard two-cell flashlight. Other units are available for 5 power, 20 power, and 40 power magnification. Please mention PEE No. 70 in your request for further details.



A bindery employee of The William Feather Co., Cleveland commercial letterpress printing plant, is shown filling the four hoppers with signatures on the firm's new Sheridan 4D Inserter and A-T Trimmer recently installed in the plant. The signatures are advanced by pins on a conveying chain to the wire stitching mechanism located in the illustration at the far left end of the machine. The machine is designed to gather, stitch and trim books which range in size from $4\frac{1}{4}$ in. by $6\frac{3}{4}$ in. to 11 in. by 16 in. The machine is operated by two workers at production speeds averaging between 3000 and 4000 finished books per hr.

Modernization Program Is Continued

IN LINE with an equipment modernization program at The William Feather Co., attention was recently turned to installations capable of speeding up production in the bindery. It was determined that hand operations in the bindery were the greatest impediment to scheduled delivery dates.

The worker in many of today's printing plants, as in yesterday's, is prevented from attaining maximum daily production by excessive hand fabricating operations in processing the printed job. The much sought elimination of wasteful fabricating practices has resulted in a test of the ingenuity of many production and mechanical executives. The bindery, in particular, has had difficulty coping with this problem as the plant's production increased.

Work produced by this Cleveland commercial letterpress printing plant includes, catalogs, folders, booklets, bulletins, publications, trade papers, magazines, broadsides, pamphlets, circulars and reports. Approx. 200 thousand *William Feather Magazines* are printed each month by the company.

With a great many jobs, especially publication work, a variety of bindery operations are usually involved before the job is sent to shipping and hence to the customer. The Feather company believes it has found the antidote to the excessive fabricating headache and visual facts and figures back up its claim.

In use in the Feather plant's bindery is a new Sheridan 4D Inserter and A-T Trimmer which, in one continuous operation, inserts or onserts, saddle-stitches and trims up to four signatures for booklets or publications. Designed and built by the T. W. & C. B. Sheridan Co., the machine is operated by two workers at production speeds averaging between 3000 and 4000 finished books per hr. The inserter is equipped with four stations or boxes for accommodating different signatures in the saddle-stitched book.

Old Method

Formerly, a book containing four signatures was assembled by four different workers placing signatures one on top of the other as they traveled along a continuously moving chain saddle. At the end of this assembly was an automatic stitcher where the book received the wire staple.

As the stitched product moved out of the stitching apparatus, another worker gathered up the books and stacked them on a bindery truck. When the truck was loaded, it was wheeled over to the paper cutter where the cutter operator unloaded the truck in lifts and made the three necessary cuts at the top, bottom and side. The finished books then had to be loaded again onto another truck and wheeled out to the shipping department.

Cuts Handling and Cost

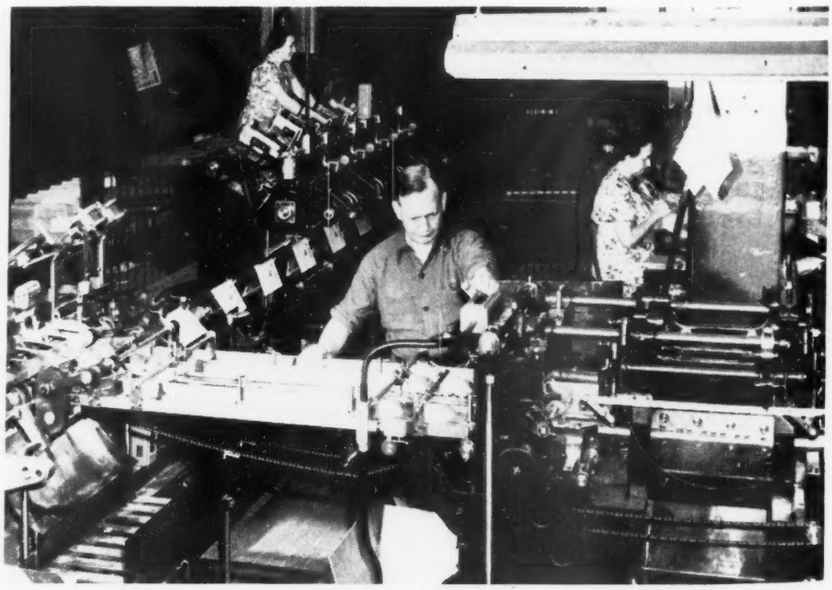
Four separate handling operations were involved in this old method resulting in loss of production time and increased costs. The installation of the Sheridan machine made it possible to perform the operation at more than three times the speed of the old procedure and eliminated two of the handling operations, at greatly reduced labor cost. This experience alone has proved to the Feather company that new equipment installation is the key to increased profits and more production.

In operation, the signatures are stacked by hand into a semi-vertical hopper at each of the four stations or boxes. The capacity of these hoppers is governed by the number of pages in the signature and the thickness of the stock the job has been printed on. Depth of the hopper is 12 in.

Special Designed Machine

The Sheridan inserting and trimming

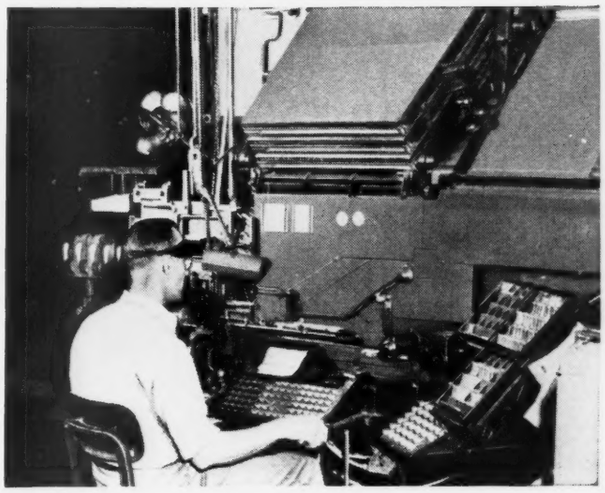
(Continued on Page 108)



View of the Sheridan 4D Inserter (left background) and A-T Trimmer (foreground) in operation in the plant of The William Feather Co., Cleveland. John DeGant, operator of the machine, is shown at one of the five control stations located at various places on the machine for starting and stopping. As the saddle stitched books leave the Christensen stitcher (left), double conveyor chains carry them singly into the first cutting station where the front edge is trimmed. At the second cutting station, the books are trimmed at the head and tail, and are delivered fanned out on a conveyor belt (not shown in picture). DeGant takes the finished books off the conveyor belt and stacks them on a bindery truck for movement to the shipping department.

Model 34 Wide Range Linotypes Set Production Records and Cut Costs

FOR THE "SOUTHEAST MISSOURIAN," CAPE GIRARDEAU, MO.



Frank Hohler, Operator: "The 34 is the most flexible machine I've ever used in my 22 years as an operator. The Quadder cuts a good third off my composing time, and I've never seen magazines so easy and fast to shift. The Thermo-Blo gives us more solid slugs, too—saves a lot of time and extra work."

Dorman J. Barks, Superintendent of Composing Room: "All our previous records for ad production have been shattered by our two model 34's, and overtime's been cut a good four hours a week. We have plenty of room to expand in these machines, too. By that I mean we can add larger faces any time we please. I'd recommend the model 34 for any newspaper or job printing plant."

Jean Giroir, Operator and Machinist: "I've been an operator for 30 years, and I like the large faces the 34 carries in those wide main magazines. I've almost forgotten what a pi stacker is. And talk about easy maintenance—all I've given the 34's in the 18 months we've had them is routine checkups. The 34 is tops from any viewpoint!"

Alvin Macke, Business Manager: "We use our 34's for food-store advertising, straight ad display, news heads and ad guts. That means quick change from 36 down to 10 point on one machine, and 24 through 8 point on the other. Hand composition of display has been cut 15%. What's more, the Model 34's Mohr Lino-Saw saves us 50% on make-up and other floor work."

Brand New Record Breakers and Cost Cutters! The newly engineered Wide Range Linotype Models 33, 34, 35, and 36 provide even greater speed of operation and simpler maintenance. Ask your Linotype Production Engineer to show you all the advantages of these new machines. Mergenthaler Linotype Company, Brooklyn 5, New York.

• LINOTYPE •

Set in members of the Times Roman, Erbar and Spartan Families

Officers of Northwest Mechanical Conference.—(Left to right) Robert E. Lee, St. Paul (Minn.) *Pioneer Press* and *Dispatch*, First Vice President; Ralph Carson, Dunwoody Institute, Secretary-Treasurer; John Breen, Duluth *Herald-News Tribune*, President and John Copeland, Minneapolis *Star* and *Tribune*, Second Vice President.

Mechanical Department Techniques Discussed at Iowa Conference

By PAUL F. KAMLER*

**Mechanical Supt., Clinton (Ia.)* Herald *and Secretary-Treasurer, Iowa Conference.*

WHEN the 24th annual meeting of the Iowa Newspaper Mechanical Conference was called to order at the Montrose hotel, Cedar Rapids, Iowa, on May 5 by L. T. (Tommy) Caldwell, *Gazette*, Cedar Rapids, President of the Iowa Conference, it was learned that there were 13 states represented with the largest registration in recent years. Also, it was the first time that weekly newspapers were invited and a session devoted entirely to their needs conducted.

The address of welcome at the opening session was given by Joseph F. Hladky, jr., Vice President and Publisher of the Cedar Rapids (Iowa.) *Gazette*, who was followed by Robert Caldwell, President of the Cedar Rapids Chamber of Commerce. Officers who served with President Caldwell this year were: Ross Devine, *Times*, Davenport, First Vice President; Gerald Weis, *Telegraph-Herald*, Dubuque, Second Vice President and Paul F. Kamler, *Herald*, Secretary-Treasurer.

Engraving Session

The various department sessions were conducted with the Engraving session handled by Clayton Weber, LaCrosse, Chairman, assisted by Jerry Lee, Ottumwa, and Larry Nebergal, Mason City, Co-chairmen. The session was featured by a panel of experts, Harvey Holsapple, Sales Manager Harold M. Pittman Co., Clarence Walkoe, Imperial Type Metal Co., Ira Hoffman, Eastman Kodak Co., and John Vlk, Asst. Pressroom Foreman, LaCrosse (Wis.) *Tribune*.

Stereotype and Press Session

The Stereotype and Press session was in charge of L. J. (Mike) Mills, *Herald*, Clinton and Joe Tyler, *Democrat*, Davenport, Co-chairmen.

William Ingram, jr., Sales Manager, Wood Flong Corp., handled the subject *The Making of Newspaper Mats* in an able manner. *The New Goss Universal Press* was the subject of a talk and film presented by William T. Goss, Vice President Goss Printing Press Co., who was assisted by Dave Baar, Goss Representative.

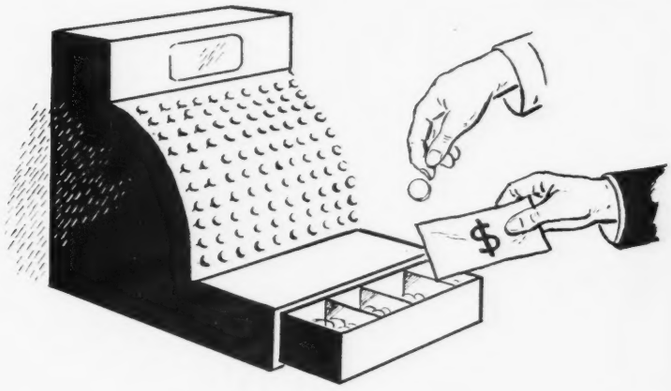
Controversial Subject

The topic assigned to Joe Goggin, President, Newspaper Publishers Supply Co., was *The Proper Pressure in Mat Molding*. Goggin said this was a controversial subject as there are too many differences existing between the individual requirements from one newspaper plant to another for any single opinion or experience to serve generally. He went on to say that some idea of the extent of these differences in requirements may be obtained from the fact that well over a hundred variations of molding cushions are in use to do the same job. These variations are imposed largely by existing circumstances that make compromise and compensation necessary to produce the best molded result. Such compromises and compensations are frequently contrary to the basic rules involved for molding stereotype mats. Goggin said that, basically, the proper method for molding the impression of page type forms will produce a uniform penetration of its printing surfaces into the mat. The correct pressure applied will correspond to the force required to imprint the paper. Uniform penetration of the printing surfaces of the form can be impressed in the

(*Continued on Page 112*)

Officers, Iowa Newspaper Mechanical Conference—From left to right they are: Second Vice President Glen L. Meloy, Des Moines (Ia.) *Register* and *Tribune*; President, Ross DeVine, Superintendent, Davenport (Ia.) *Times*; Immediate Past President, L. T. (Tommy) Caldwell, Stereotype Supt., Cedar Rapids (Ia.) *Gazette*; Secy.-Treas., Paul F. Kamler, Superintendent, Clinton (Ia.) *Herald*; First Vice Pres., Gerald Weis, Dubuque (Ia.) *Telegraph-Herald*.

the reader's nickel . . .
the advertiser's dollar . . .
are they VOTED for your paper?



The cash register is the ballot box of Business. Everybody votes. Every day is election day. More important than electing politicians to office, the business ballot box decides who shall stay in business and who shall be voted out. Importance is enhanced or diminished. Precedence of men and concerns established in their respective fields.

Many fine newspapers have been voted to top spots in various fields, on the basis of flawless printing production, assisted by Certified Mats.

CERTIFIED DRY MAT CORPORATION

9 Rockefeller Plaza • Dept. M, New York 20, N. Y.

For dependable stereotyping, rely on Certified Dry Mats.

Certified DRY MATS

Operator Herman Max eases a gas-powered Clark lift truck up to a roll of newsprint inside a boxcar. In picking up the roll, Max maneuvers a pointed metal plug (bartell) into the open center of the core and simultaneously causes a metal plate to press against the roll. The roll is then lifted gently and hugged to the machine while being carried out of the boxcar to the waiting trailer.

Materials Handling System

By RALPH THORNTON
Minneapolis (Minn.) *Star* and *Tribune*

IN THIS machine age, when most operations in the production of newspapers have been mechanized to a fine point of ease and efficiency, there is yet one need for mechanization which many newspaper firms might well consider.

It involves the basic operation of unloading newsprint upon which the newspapers are printed. And many a publisher, who has bought every advanced newspaper production machine in the catalog, may find his newsprint still being unloaded by hand if he will take a trip to the freight dock to see.

Ton for ton, ounce for ounce, there is no other single component of the newspaper manufacturing process which is more precious today than this white ribbon of paper. The growing world shortage of newsprint now dictates kid-glove handling for the huge rolls of paper.

Since a majority of metropolitan newspaper plants do not have side tracks for unloading, and newsprint comes by railroad (in most cases) from the mill, it is handled twice in being moved to the plant for use or storage. This presents a double opportunity for handling damage, if manpower and inadequate tools are all that are supplied for the job. In many cases the tools consist of a couple of "two-by-fours" and a hand truck.

Last summer production executives of the Minneapolis *Star* and *Tribune* placed in operation modern materials handling equipment at its unloading dock. They estimate that this new equipment will save a couple of hundred thousands of dollars each year in damage losses, but what is more important, it will also save the newsprint.

Star and *Tribune* paper haulers no longer touch the newsprint on its precarious journey to the plant. At the rail yards a hauler drives one of the two gas-powered Clark Lift Trucks from the dock into a newsprint-loaded boxcar, picks up a roll, and deposits it in an upright position on the dock.

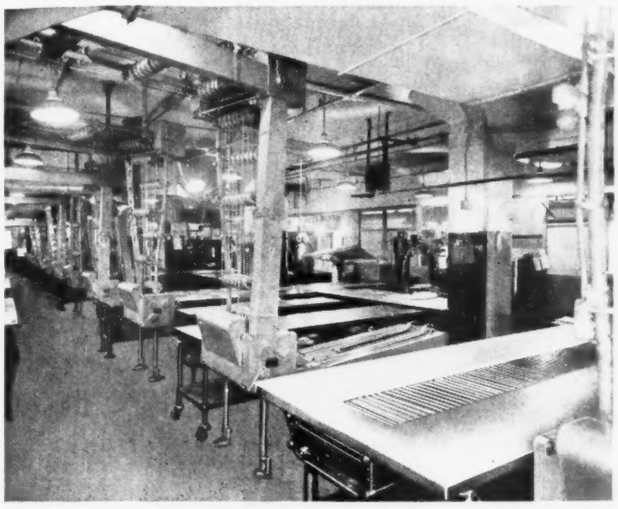
In picking up the roll, the operator maneuvers a pointed metal plug (called the Bartel device) into the open center of the core and simultaneously causes a metal plate to press against the roll. This is reported to eliminate the extensive damage that resulted when the haulers used to tip the roll on its edge to get the hand truck underneath it.

(*Continued on Page 105*)

Loading rolls of newsprint on truck trailer for trip from boxcar to the plant of the Minneapolis *Star* and *Tribune*. Two types of power-driven automatic lift trucks are shown performing the operation under guidance of Bill Abar (left). The truck in the background, driven by Herman Max, is equipped with a device which lifts the roll by inserting a plug (bartell) into the core of the roll. This truck has just brought a roll from the boxcar and will deposit it near the truck trailer, where the other lift truck, operated by Tom McKeon, will load it on the trailer. The latter truck is equipped with curved metal arms designed to grab the roll in standing position, turn it through a 90 deg. angle to horizontal position in mid-air, and place it on the trailer as shown here.

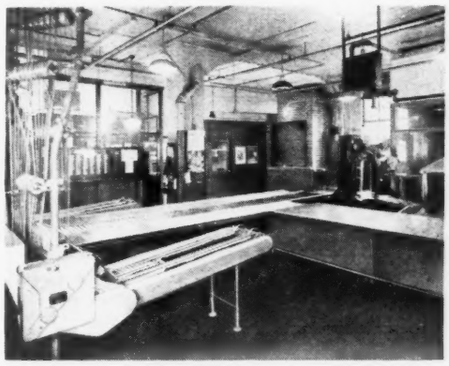
JAMPOL METHODS AND MAILROOM EQUIPMENT.. provide SPEED and EFFICIENCY for the NEW YORK WORLD-TELEGRAM AND SUN

The remarkable efficiency of this well-known newspaper's mailroom is, in large measure, based around Jampol Methods and Equipment . . . *developed through more than a quarter of a century of specialized experience in this field.*

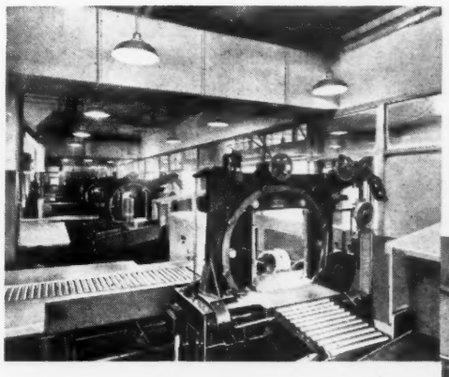


In this installation, the output of 12 high speed presses is processed through 6 Signode Wire Tying Machines, via 6 JAMPOL Live Roller Power Type Feeder Conveyor Units, 6 Pushers, and 6 Distributing Belts for dispatching to delivery trucks.

MAILROOM OF THE NEW YORK WORLD-TELEGRAM AND SUN. Major equipment consists of 12 Cutler-Hammer Conveyors, 6 JAMPOL Live Roller Power Type Feeder Conveyors (introduced in 1937 at THE BALTIMORE SUN), 6 Pushers (MILWAUKEE JOURNAL FEEDER MECHANISM), and 6 SIGNODE Wire Tying Machines.

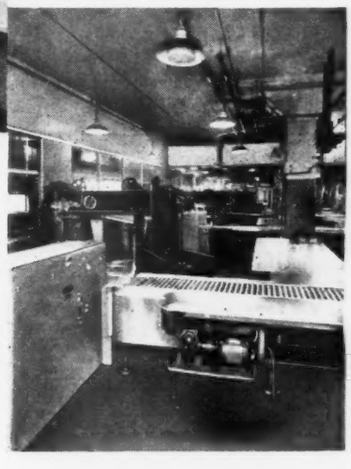


After processing and preparing stacks from the Cutler-Hammer Conveyor, they are placed on the JAMPOL Live Roller Power Type Feeder Conveyor for delivery to the tying machine. Rolled bundles are prepared on the table, and placed on the belt conveyor for delivery to the trucks, together with the wire tied bundles.



View showing the 6 Signode Wire Tying Machines, each fed by the JAMPOL Live Roller Power Type Feeder Conveyor, in conjunction with a Pusher.

When loose stacks arrive on the JAMPOL Conveyor at the Pusher, they are automatically tied and ejected to a conveyor leading to the loading platform. This is accomplished at the rate of 22-24 single tied, or 10-12 double tied bundles per minute.



We will gladly discuss any problems involving the handling of newsprint, stereotype plates and mailroom products . . . Call us.

THE JAMPOL COMPANY, INC.

728-742 61st Street, Brooklyn 20, N. Y.

THERE ARE NOW IN USE OR ON ORDER 64 PUSHERS AND 165 JAMPOL LIVE ROLLER POWER TYPE FEEDER CONVEYORS.

Conference Dates *(with organization names and principal officers)*

American Photoengravers Association — 1951 Convention, Netherland Plaza Hotel, Cincinnati, O., October 8, 9 and 10. W. K. James, President; Frank J. Schreiber, Executive Secretary, 166 W. Van Buren St., Chicago 4, Ill.

ANPA Mechanical Conference—1951 Conference, Edgewater Beach Hotel, Chicago, June 11, 12 and 13. Chairman of the Committee, L. J. Griner, Production Manager, Detroit *News*. Manager ANPA Mechanical Dept., Vernon R. Spitaleri, 370 Lexington Ave., New York 17, N. Y.

Fifth District Craftsmen's Conference — 1951 Conference, Claypool Hotel, Indianapolis, Ind., June 15 and 16. President, J. H. Clendenin, Indianapolis Blue Print Co., Inc., 600 E. Ohio St., Indianapolis, Ind.; Secretary-Treasurer, Robert Wolf, Richardson-Taylor-Globe Co., 4501 Mitchell Ave., Cincinnati 32, O.

Gravure Technical Association—1952 Conference, Biltmore Hotel, New York, N. Y., January 1952, exact dates to be announced later. President, Len S. Pinover, Intaglio Service Corp., 305 East 46th St., New York, N. Y.; Secretary-Treasurer, J. E. Hazel, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conference—1952 Conference, Hotel Statler, Detroit, January 13, 14 and 15. President, Joseph E. McMullen, Asst. Production Manager, Milwaukee (Wis.) *Journal;* Secretary, Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press;* Chairman, Mfrs. and Suppliers Committee, Edgar Flint, Howard Flint Ink Co., Clark Ave. & M.C.R.R., Detroit 9, Mich.

Illinois Newspaper Mechanical Conference—1951 Conference, Hotel Kaskaskia, LaSalle, Ill., September 22 and 23. President, John Barron, La Salle (Ill.) *News-Tribune;* Secretary-Treasurer, Wilbur L. Augspurger, Peoria (Ill.) Newspapers, Inc.

Int'l. Assoc. Electrotypers & Stereotypers — 1951 Convention, Kenmore Hotel, Boston, Mass, October 23, 24 and 25. 1951 Spring Conference, Hotel Cleveland, Cleveland, April 12 and 13. A. P. Schloegel, Executive Secretary, 701 Leader Bldg., Cleveland 14, O.

International Association of Printing House Craftsmen—1951 Convention, Statler Hotel, Boston, Mass., August 19, 20, 21 and 22. President, Fred C. Baillie, 21 Iona, Ottawa, Can.; Executive Secretary, Pearl E. Oldt, 18 E. Fourth St., Cincinnati 2, Ohio.

International Graphic Arts Education Association—1951 Conference, Hotel Statler, Cleveland, O., June 17, 18, 19 and 20. President, George J. Bilsey, East High School, Cleveland, O.; Educational Director, Fred J. Hartman, 719 Fifteenth St., N. W., Washington 5, D. C.

International Typographic Composition Association—1951 Convention, Hotel Windsor, Montreal, Can., September 13, 14 and 15. President, O. B. Powell, General Manager, A-1 Composition Co., 155 E. Ohio St., Chicago; Frank M. Sherman, Executive Director, 1015 Chestnut St., Philadelphia 7, Pa.

Iowa Daily Newspaper Mechanical Conference — 1952 Conference, Blackhawk Hotel, Davenport, Ia., May 17, 18 and 19. President, Ross DeVine, Superintendent, Davenport (Ia.) *Times;* Secretary-Treasurer, Paul F. Kamler, Mechanical Supt., Clinton, (Ia.) *Herald.*

Kansas Newspaper Mechanical Conference — 1951 Conference, Broadview Hotel, Wichita, Kan., September 15 and 16. President, Glenn Cummins, Wichita (Kan.) *Eagle;* Secretary-Treasurer, Larry Miller, 701 Jackson St., Topeka, Kan.

Lithographers National Association—1951 Convention, Spring Lake, N. J., during the week starting June 25. Executive Director, W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Mechanical Conference—1952 Conference, Bellevue-Stratford Hotel, Philadelphia, March 20, 21 and 22. Jointly sponsored by the New Jersey Press Assoc. and the Pennsylvania Newspaper Publishers Assoc. Conference Director, Theodore A. Serrill, PNPA General Mgr., 209 Telegraph Bldg., Harrisburg, Pa.

Missouri Newspaper Mechanical Conference — 1951 Conference, Bothwell Hotel, Sedalia, Mo., October 20 and 21. President, Earl H. Barker, Composing Room Foreman, St. Louis (Mo.) *Star-Times;* Secretary-Treasurer, O. K. Hammitt, Mechanical Supt., Moberly (Mo.) *Monitor-Index.*

National Association of Litho Clubs—1952 Convention will be held in Philadelphia, hotel and dates to be announced later. President, Anthony Capello, 265 Rocklyn Rd., Upper Darby, Pa.; Secretary, Joseph H. Winterburg, Phillips & Jacobs Co., 620 Race St., Philadelphia, Pa.

National Association of Photo-Lithographers — 1951 Convention, Statler Hotel, Buffalo, N. Y., September 5, 6, 7 and 8. Executive Vice President, Walter E. Soderstrom, 317 West 45th St., New York 19, N. Y.

National Printing Equipment Association, Inc. — 1951 annual meeting of the directors and members, Hotel Statler, Boston, October 26. President, R. Verne Mitchell, Harris-Seybold Co., 4510 E.71st St., Cleveland 5, O.; James E. Bennet, Secretary, 140 Nassau St., New York 7, N. Y.

New England Mechanical Conference — 1951 Conference, Statler Hotel, Boston, November 3 and 4. President, Howard E. Simons, Waterbury (Conn.) *American-Republican;* Secretary-Treasurer, Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day.*

Northwest Mechanical Conference — 1952 Conference, Hotel Duluth, Duluth, Minn., September 20, 21 and 22. President, John Breen, Mechanical Supt., Duluth, (Minn.) *Herald* and *News-Tribune;* Secretary-Treasurer, Ralph Carson, Dunwoody Industrial Institute, Minneapolis, Minn.

Pacific Mechanical Conference — President, L. M. Richardson, Mechanical Supt., Los Angeles *Herald-Express;* Secretary for the North, Edw. N. Conley, color press foreman, San Francisco *Chronicle;* Secretary for the South, Fred J. Moyer, Los Angeles *Daily News.*

Printing Industry of America — 1951 Convention, Hotel Statler, Boston, October 24, 25, 26 and 27. President, Robert H. Caffee, President, Wm. G. Johnston Co., Pittsburgh, Pa.; James R. Brackett, General Manager, 719 Fifteenth St., N. W., Washington, D. C.

Research and Engineering Council *of the Graphic Arts Industry, Inc.*—President, Frank F. Pfeiffer, Reynolds & Reynolds Co., 800 Germantown Ave., Dayton, O.; Official Headquarters, Bernard Taymans, 719 Fifteenth St., N. W., Washington 5, D. C.

SNPA (Eastern Div.) Mechanical Conference—1951 Conference, Atlanta Biltmore Hotel, Atlanta, Ga., August 27 and 28. Chairman, L. H. Pickens, Mechanical Supt., Greenville (S.C.) *News-Piedmont;* Secretary, Tom Tanner, c/o SNPA, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conference—Chairman, Ralph Moffett, Mechanical Supt., Dallas (Tex.) *Times-Herald;* Conference Secretary Pro Tem, Mike Murray, 621 Texas Bank Bldg., Dallas 2, Tex.

Technical Assoc. of the Graphic Arts (TAGA replaces TALI)—Next annual meeting to be held in Cleveland, dates and hotel to be announced later. President, Paul W. Dorst, 3373 Morrison Ave., Cincinnati 20, O.; Secretary-Treasurer, Paul J. Hartsuch, Intl. Printing Ink Div. of Interchemical Corp., 161 W. Harrison St., Chicago 5.

Patents

For The GRAPHIC ARTS

Covering patents issued April 3, April 10, April 17 and April 24.

All new patents for the Graphic Arts are reported exclusively for Printing Equipment Engineer by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. Printing Equipment Engineer is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforation

2,549,890. BOOK CASING-IN MACHINE. Production rate is increased by providing apparatus comprising a cover magazine capacitated to receive covers in superposed relationship with one leaf and the hinge overlying the other leaf. The floor of cover-holding hopper has a shelf or lip which supports the extending part of the first leaf so that the second leaf of the lowermost cover swings down about the hinge to lie in the path of "fillers", or assembled signatures to be bound. Then as the "filler" is advanced below the hopper, it will pass into the cover over the second (lower) leaf of the cover and up to the hinged back and then by continuous movement it will draw the cover out of the hopper and away from the shelf. Invented by John A. E. Burls, Kenton, England. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application Jan. 7, 1948; in Great Britain July 3, 1946. 15 Claims.

Composing Room Equipment

During the four weeks covered by this report, no patents have issued for this heading.

Feeding, Folding, Delivery

2,548,136. REGISTER CONTROL MEANS FOR CONTINUOUS AND INTERMITTENT WEB FEED MECHANISM. Control is for use on a combination printing machine operating on a continuously moving web, with cutting, scoring, or punching machinery operating on the same web intermittently. Feed wheels are used to engage web tightly at all times. Cams and cam rollers are used for accelerating and decelerating the feed wheels and a gear segment is provided for uniform speed rotation of the feed wheels. The stop position of the feed wheels is accurately predetermined by a pilot wheel and a pilot which engages an opening in the pilot wheel during the dwell period. The pilot is cam-controlled for high speed operation. Invented by Frederick Auer, Teaneck, N. J. Assigned to Champlain Co., Inc., Bloomfield, N. J. Application June 22, 1946. 31 Claims.

2,549,364. SHEET FEEDING MACHINE. Cardboard or other thick sheet materials are fed to a processing machine and the supply is periodically replenished without stopping the feeding operation. The machine includes a plurality of endless elevators each having means for removably supporting in superposed spaced relationship platforms on each of which is carried a pile of sheets and for supporting independently of the platforms a draw plate interposed between each platform and the pile of sheets thereon. The draw plates are of a thickness considerably less than that of the platforms and such that they are able to support, independently of the platforms, only a small proportion of the sheets forming each completed pile. Invented by Henri Bobst, Lausanne, Switzerland. Unassigned. Application Aug. 1, 1947; in Switzerland April 26, 1941. 9 Claims.

2,549,630. PILE FEEDER is for feeding sheets from the top of a pile to a printing or folding machine. The pile feeder is particularly applicable to sheets that have been printed with one or more colors, so that a pile several thousand sheets thick may be uneven. The feeder provides that the sheets at the top of the pile have their forward edges approximately level, in order that they may move readily into the bite of the pull-out rolls. This is accomplished by the provision of means for quickly and easily raising or lowering one or the other of the forward corners of the pile support in order to maintain the pile at its forward

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end level transversely. Invented by Irving F. Niles, Shaker Heights, O. Assigned to Harris-Seybold Co., Cleveland, O. Application May 25, 1948. 7 Claims.

2,550,032. TAG FEEDER is designed to feed tags evenly into a printing machine in spite of increase bulk at one end due to reinforced openings in the tags. The device includes a bracket having an attaching head at its rear, a forwardly extending rod, and a hinge plate which is slidably mounted on the rod. A spring on the rod normally urges the hinge plate forwardly on the rod on which there are adjustable stops for limiting movement of the hinge plate. A cross-wise tag engaging arm is hinged at one end to hinge plate and is free at its opposite end for engaging with the back rest supporting plate of a sheet feeding mechanism of a printing press. Invented by Henry Zabel, Jr., Harry H. Zabel, and George Harrison, Sheboygan, Wis. Unassigned. Application Jan. 23, 1948. 2 claims.

2,550,155. PRINTING PRESS DELIVERY MECHANISM. Bendable, non-breaking, replaceable and fire-resistant pusher fingers of aluminum alloy are featured. The arrangement includes a movable carriage which rides on rails, and a pusher finger shaft extending between the rails. The fingers are attached to the shaft by insertion into sockets in the shaft and by means of headless set screws. Each finger is slotted to engage the set screws. A crank on the shaft is attached to a lever near the forward end of the press delivery by a rod. By a pull on this rod the shaft is rotated to lift the pusher fingers. When the carriage strikes the lever at the forward end of its stroke, such pull on the rod is effected. Invented by Lee F. Kraft, Cleveland, O. Unassigned. Application August 9, 1947. 5 Claims.

NEW

Rouse

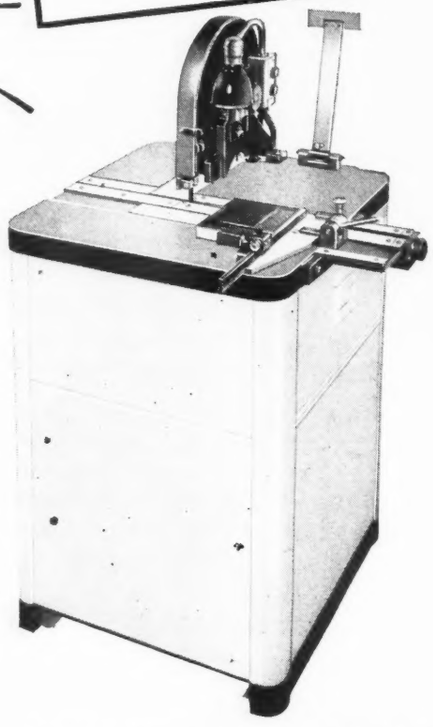

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Plate Making

2,547,527. PHOTOCOMPOSING MACHINE is provided for stepping up a film negative upon a photo-sensitized printing roller. It includes a frame having spaced parallel bearings and a mandrel rotatably mounted upon and extending through the bearings for concentrically receiving and supporting the roller. Mandrel may be held in any one of a series of selected positions of rotation. Rings are mounted on mandrel for endwise engagement with roller; they have a plurality of suction ports. A film negative is held over the roller so that the center line of the negative is disposed accurately in spaced relation to center line of mandrel and the end margins project over rings. Margins of film are held against roller by suction. Invented by Theodore Hommel, Normandy, Mo. Assigned to Universal Match Corp., St. Louis, Mo. Application May 8, 1946. 8 Claims.

2,548,537. METHOD OF MAKING CELLULOSE ESTER LITHOGRAPHIC PRINTING PLATES. A novel process of producing designs on lithographic printing plates, particularly lithographic cellulose ester printing plates, effects clean differentiation between exposed and unexposed areas of hydrolyzed cellulose ester printing plates. A hydrolyzed cellulose ester surface is sensitized with an agent such as bichromate which is capable of oxidizing hydrolyzed cellulose ester or cellulose, particularly in the presence of blue or ultraviolet light. After exposing the sensitive surface under a design such as a line or half tone negative, the exposed area of the surface is removed with a simple alkaline solution containing no oxidizing agents. Invented by William O. Kenyon and Cornelius C. Unruh, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application February 9, 1949. 10 Claims.

2,548,565. PHOTOMECHANICAL PRINTING PLATES. A photographic element has a support coated with a layer of barium sulfate friable material, a layer of asphalt, and a light-sensitive gelatin layer. This photographic element is exposed to light rays and a relief image is formed in the gelatin layers by washing away portions of the gelatin layer unhardened by exposure. Asphalt and at least part of the friable material is removed by sandblasting in those parts of the gelatin layer where the gelatin was removed. A printing metal is applied to the relief image thus formed and thereafter the printing metal is removed from the relief image in the form of a printing plate. Invented by H. C. Staehle, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application July 10, 1948. 4 claims.

2,548,765. A MATRIX is formed from vulcanized rubber or synthetic rubber compositions of the type known as ebonite or vulcanite, which have a softening or yield temperature below 100 deg. C. so that they can be moulded under pressure at a temperature below 100 deg. C. but above the yield temperature. By virtue of their latent

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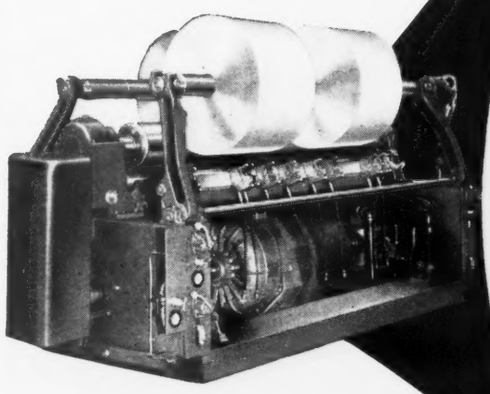

OUTSTANDING FEATURES:

- Simplicity of design
- Variable-speed Drive
- High speed (up to 1500 ft. p.m.)
- Compact—saves space
- Vibrationless
- Hydraulically driven differential Rewind Shafts
- Air-Operated Slitters for strips as narrow as ½ inch
- Accurate pressure control between Drum and Rewind Shafts
- All hydraulic and air Piping enclosed in Frame
- All Controls easily accessible
- Ease of operation and maintenance
- Efficient and economical

The new B & S #15 Duplex Rewinder is powered by a Louis Allis Eddy Current Type Variable-speed Drive. A variable volume pump driven by an A. C. motor supplies power to the rewind shafts, and the winder is powered by the Eddy Clutch. By placing the entire drive beneath the machine, B & S designers have saved valuable floor space.

Accurate pressure control and precision winding are achieved by pneumatic cylinders for raising and lowering the rewind arms. For full center winding rewind shafts can be locked in "out" position.

To eliminate all possible vibration, the B & S Duplex Rewinder is mounted on heavy cast-iron bedplate. Fully enclosed piping and easily accessible controls assure smoothness and efficiency in operation, as well as ease and economy in upkeep.

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elastic recovery these compositions can, after use in electroforming, be rendered ready by treatment e.g., with hot water, to receive another impression. Invented by William H. Banks, Hampton, Patrick B. Upton, Bromley, and John R. Scott, Croydon, England. Assigned to the Printing and Allied Trades Research Assoc., London, England, and The Research Assoc. of British Rubber Mfgrs., Croydon, England. Application September 11, 1947; in Great Britain December 10, 1946. 1 Claim.

2,550,326. A PLANOGRAPHIC PRINTING SHEET has a layer supporting a design formed by hydrophilic and hydrophobic portions. The layer is the residue of a reacted solution, the essential ingredients and their proportions being approximately 10 per cent of a water-soluble urea-formaldehyde plastic, 70 per cent of a mixture of one part tri-calcium phosphate to 2.5 parts clay and 20 per cent highly polymerized high saponification polyvinyl alcohol. By use of the novel printing plate and suitable exposure shaded printed matter may be produced, if desired, without the necessity of the usual half-tone or line negative process. Invented by Clarence A. Brown, Toledo, O. Assigned to Jones Graphic Products Co., Albuquerque, N. M. Application January 12, 1949. 12 Claims.

Printing Inks

2,547,069. QUICK-SETTING INK comprises carbon black dispersed in a liquid containing a large proportion of a partial condensation product of furfural with 2.4 diamino toluene, tetra hydro fural phthalate, and lesser amounts of an emulsifier and ethyl cellulose. The ink will set within about five seconds in an atmosphere of gaseous sulfur dioxide when applied by conventional methods of printing. Invented by Richard H. Wharton, Dayton, O. Assigned to The Standard Register Co., Dayton, O. Application September 10, 1947. 15 Claims.

Printing Presses and Equipment

2,547,706. SELECTIVE DISCHARGE CONTROL FOR INKS ON PRINTING PRESSES. In electrostatic printing, an improved image is produced by selectively and automatically controlling the intensity of the electro lines of force. This is accomplished by passing print receiving material through a printing zone, and moving a master control in timed relation to the material, producing by means of an applied high potential electric current an electrostatic field of force at the printing zone with the lines of force directed to transfer ink from an ink supply to printing receiving material. The current potential may be varied to vary the intensity of said field of force as material moves through printing zone and in correlation to the control to predeterminedly vary the densities of ink deposits on different areas of the material. Invented by William C. Huebner, New York, N.Y. Unassigned. Application August 6, 1945. 30 Claims.

2,547,817. SQUEEGEE OPERATING AND CONTROL MECHANISM for screen printing operations uses a squeegee which is adapted to function on both its forward and return strokes and is designed to push the ink or paint ahead of it, rather than to ride over it. The arrangement includes a carrier for each end of the squeegee and a cross-bar interconnecting the same. Each end of bar slidably rides on tracks placed at each side of the screen. Lift-and-reversing cams are mounted on each track and engage the cross-bar ends so as to effect forward and return strokes over the screen. Invented by Stanley L. Frank, Oakland, Calif. Unassigned. Application September 25, 1948. 10 claims.

2,548,119. STENCIL PRINTING MACHINE is of the silk screen type with a horizontal table to receive the sheet to be printed and with a frame for holding the silk screen, the frame being alternately raised and lowered automatically in timed relation to the feeding of the blank onto the table and to the movement of the ink spreader. A specific improvement is the connection between the oscillating bar operated by the eccentric lever and the screen table itself. The oscillating bar is connected by a chain to sprockets at opposite ends of the machine frame, which sprockets in turn are connected by a crank pin and connecting links to the screen frame, thus operating to raise and lower the frame. Invented by George H. Pembroke, New York, N. Y. Unassigned. Application May 20, 1947. 11 Claims.

2,548,217. DOCTOR BLADE RECIPROCATING MECHANISM FOR INTAG-

TINGUE
TRADE MARK
PRINTING PRESS
BLANKETS
TOPS in precision
press packing...
Check this complete line of press packing which offers the proper gauges or combination of gauges for every press condition.
COMBINO — An extremely durable clean printing laminated blanket. Gauges .062", .083", .093".
"TINGUE" COATED FELT — For those who prefer a softer packing. Gauges .083", .093".
UNCOATED WOOL FELT — Gauges .063", .072", .083".
TOP Drawsheet is firm, durable, economical and of long life. Gauges .016", .025", .030".
GOLD TYMPAN Drawsheet—An old favorite for flat bed presses. Gauge .012".
IMPROVED SATISFACTION—A fabric impregnated with "Neoprene" and coated with "Calvaprene." Gauges .024", .026".
STERLING—The latest plastic drawsheet. Gauge .025".
CUSHION CORK* — A highly resilient underpacking. Gauges .059" to .085".
TINGUCORK* — Much firmer than "CUSHION CORK" and preferred where precision plates are available. Gauges .032", .055" to .086".
KORKER* — Under Blanket for older type presses or where an unfavorable mechanical condition exists. Gauges .058" to .070".
FOUNDATION—A firm, durable oilproof under packing laminated by duPont with "Neoprene'. Gauges .032", .040", .053" to .085", .120".
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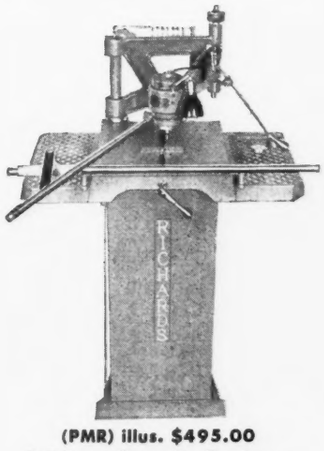

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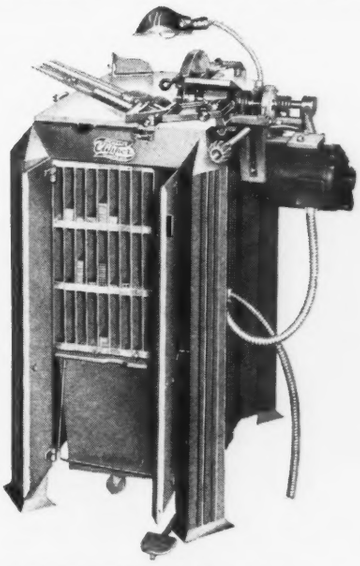

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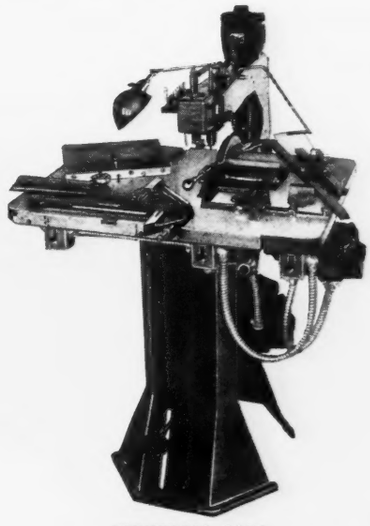
3 Models



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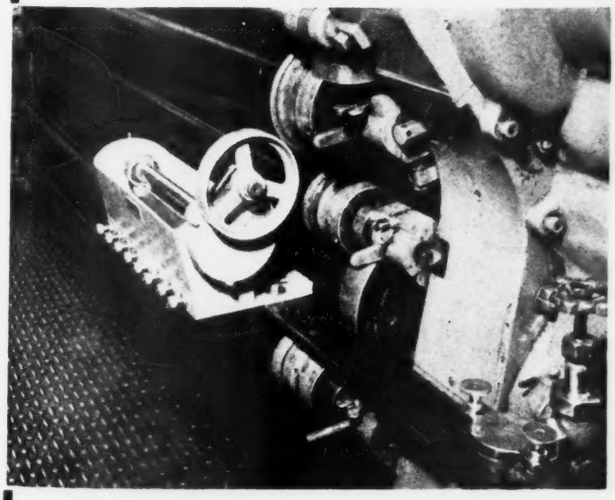

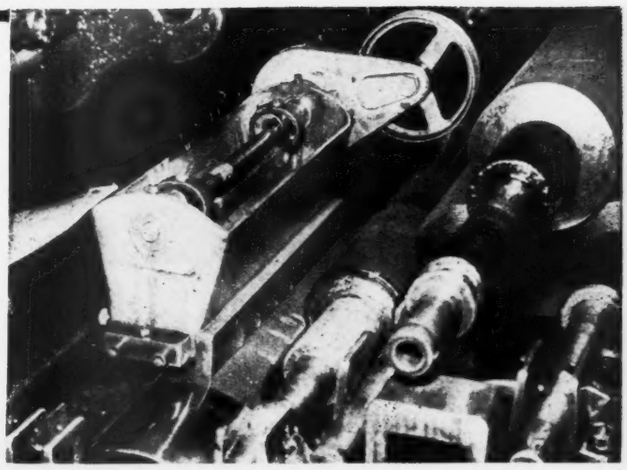

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mounted on Goss decker type press

A "Capco" eliminates most wash-ups, for it's never necessary to take fountain apart to clean, thereby saving time on short or long runs. Simplicity of mechanism; quickly adjusted; safe, self-contained unit which does not clutter up walkways or other press clearances. Easily installed, without expensive attachments.

WRITE FOR LITERATURE

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LIO PRINTING MACHINES will automatically vary the position at which the motion of the blade is reversed at the end of each stroke. The stroke of the doctor blade is alternately increased and decreased automatically within a certain range and in cycles, while the machine is running. Invented by William F. Huck, Forrest Hills, and Franz Heller, Mount Vernon, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application October 3, 1945. 3 Claims.

2,549,226. MEANS FOR HOLDING PRINTING PLATES TO ROTARY PRESSES. The spiral track frame of a rotary printing press comprises a plurality of spiral dovetailed grooves. The printing plate has reinforcing strips in its side marginal edges. A plurality of block members surround the printing plate and slidably rest in some of the dovetailed grooves. Rotatable cleats on each of the block members are capable of engagement with the marginal edge of the printing plate. Worm gear means are incorporated in each of the blocks and are in engagement with the teeth of the dovetailed groove in which they operate. Screws extend through upper and lower marginal edge portions of the plate and are threaded into adjacent block members. Worm gear means in blocks at side of plate move blocks toward plate. Worm gear means in blocks at upper and lower ends move blocks in a direction away from the plate. Invented by Robert R. Myers, Jr., Des Moines, Ia. Unassigned. Application Sept. 27, 1948. 2 Claims.

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(The above is the actual engraving by George Sahagian of Boston which won the highest award in the Zomo Contest some years ago.)

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2,549,605. A WEB AND REGISTER CONTROL MECHANISM is provided for multi-color web printing, whereby the spacing between like points in impressions printed on the web are maintained constant by variably stretching the paper or other material as it passes through the printing machine. A web spreader device is under control of a first pair of light sensitive cells, a second web spreader device is under control of two other light sensitive cells, and there are means under control of the four light sensitive devices for adjusting the printing cylinder axially. Invented by William F. Huck, Forest Hills, N. Y. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application April 16, 1945. 9 Claims.

2,549,813. FRAME SUPPORT AND DRIVE MEANS FOR PRINTING MACHINES. The machine incorporates substructure units, printing units, spacing members, superstructure units and folders, which without change of design, may be arranged in various combinations as may be required to produce a desired range of printed products. The units are connected to a common drive shaft, and each unit has a pair of front and back box-type side frames with passages accommodating the drive shaft. The side frames are connected and cylinders are rotatably supported between the side frames. Gears located in the side frames drive the cylinders, and one side frame of each unit has bearings for the common drive shaft. A motor for each unit is supported between adjacent units by the connecting members and are geared to the drive shaft. Invented by William F. Huck, Forest Hills, N. Y. and Anton Stobb, Union Township, Hunterdon County, N. J. Assigned to R. Hoe & Co., Inc., New York, N. Y. Application Feb. 15, 1945. 9 Claims.

2,549,847. METHOD OF AND MEANS FOR PRODUCING DECORATED MATERIAL. A mesh printing surface, made of metal wire of either soft or hard character, plastic, etc., is used to obtain a three-dimensional printing effect on wallpaper, fabric, plywood, regular printing papers, and the like. The design area is formed in the wire mesh surface by embossing and subsequent flattening. A feature of the invention is the use of an endless band of printing mesh die traveling on two rolls, the ink being sprayed through screen or applied by rolls, the design repeating itself after each revolution on wallpapers, wrapping papers, drapes, ribbons, wrappers for subprints on safety paper, check, policies, bonds, etc. The die may also be used with special marking machinery and stenciling devices. Invented by Edgar C. V. Oldofredi, New York, N. Y. Unassigned. Application December 4, 1944. 6 Claims.

2,550,318. REGISTER CONTROL MECHANISM is provided for web presses and the like driven through differential gearing including a shaft which introduces corrective movements into the

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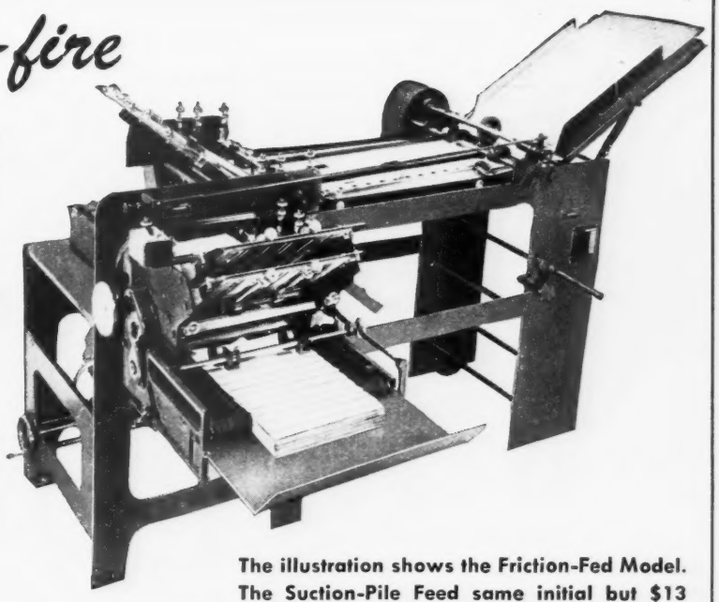

The illustration shows the Friction-Fed Model. The Suction-Pile Feed same initial but $13 per month additional.

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differential gearing for running register. The shaft serves to correct the register of two presses or the like operating on a moving single continuous web. A control device is provided for causing rotation of the shaft when desired. Means responsive to the actual resulting rotation of the shaft cause a signal which may be used as an approximate measure of the amount of register correction being introduced by the control device. Invented by Emory W. Worthington, Upper Montclair, and George J. Schowerer, Englewood, N. J. Assigned to Champlain Co., Inc., Bloomfield, N. J. Application July 10, 1947. 2 Claims.

2,550,454. INKING MECHANISM FOR ROTARY INTAGLIO PRINTING PRESSES accomplishes effective closure about a reciprocating doctor blade without the use of any seal blade at all. A generally trough-shaped fountain is adapted to be located beneath the design cylinder with its front and rear wall rising on either side of the cylinder. Mechanism includes a doctor blade and a supporting bracket for the doctor blade including a front wall underlying the doctor as well as a depending rear wall positioned to overlap in closely spaced relation the upper portion of the adjacent rear wall of the fountain. Both top and rear bracket walls extend imperforately for the full length of the doctor. The bracket is supported for endwise bodily reciprocation from a point exterior of the fountain. Invented by Curtis S. Crafts, Oak Park, and Emory W. Worthington, Chicago, Ill. Assigned to The Goss Printing Press Co., Chicago, Ill. Application June 13, 1945. 22 Claims.

Mergenthaler Report

Martin M. Reed, President of Mergenthaler Linotype Co., announced in the semi-annual report to the stockholders that total net sales of the company were approx. 4 per cent higher than those of the corresponding period of the 1950 fiscal year. Reed stated operating results for the last half of the 1951 fiscal year are expected to be as satisfactory as those of the first six months' period.

New Western Newspaper Union Branch—The Lincoln, Nebr., office of Western Newspaper Union moved recently into its new building consisting of 36 thousand sq. ft. of floor space. The building is constructed on three levels: the ground floor which encloses the offices and display room; the warehouse which is at freight car level, and an upper level for bulk material storage. John R. Hedge is Manager of the Lincoln branch, located at 2005 Y St. Two storage areas are used in the WNU building, one for heavy merchandise where stock is binned or stacked on pallets to a 12 ft. height, and one in which the supplies are arranged on racks. Heavy equipment and supplies are moved by fork lift trucks. The entire building is fluorescent lighted. Two railroad docks, three outbound and one inbound truck docks are employed for moving merchandise in and out of the branch building.

Production Authority

(Continued from Page 64)

tion Authority that the industry is equipped to meet every request of the Government for increased printing to aid the defense effort without the necessity of any expansion of government printing facilities. NPA officials said a task group of nine members will be named to make a nation-wide survey of commercial printing facilities.

The survey would provide the Government Printing Office with information to procure any size and type of printing order for any Government defense agency including the armed services. Industry members were told that the Dept. of Defense anticipates over $117 million in military printing requirements in the next 18 months. About 10 per cent of this amount is expected to be done by commercial printers on contracts handled through field offices of the military establishment.

A representative of the Congressional Joint Committee on Printing told industry representatives the committee was definitely on record as being against any expansion of Government printing facilities if commercial printing establishments could handle the defense work.

A representative of the GPO said that forms for the standard rate contracts are now available and are being distributed to printers throughout the country. There are 5000 firms on this list and some 3000 of these are known to be actively interested in Government contracts, the GPO stated.

When asked if they thought an inventory limitation order would be of help in the shortage of paper stock, the industry representatives were unanimously against such an order. The problem, they said, is settling itself. While there is some delay in getting required stocks of paper, it is being procured and the situation seems to be improving, they said.

NPA said that a proposed plate conservation order, which is expected to bring out for use large supplies of old plate stocks, would put restrictions on the gauge of sheet zinc after June 1. After that time there could not be any changes on the gauges used or any shift to lighter gauges because this would require a greater use of base metal to offset the lighter gauge.

The committee was told NPA is considering allocations on pulp stocks. It was stated that any such order would not be expected to produce more pulp but would assure a more equitable distribution among paper mills. With the current production of paper stock at the annual rate of 26 million T., NPA said, there should be sufficient stocks of paper for all needs including Government requirements.

An amendment to the lead order (M-38) which is now in process, NPA said, will provide for a revision in toll arrangements whereby a smelter will be able to deliver as much lead each month as was sent him in the previous month.

MRO Reports

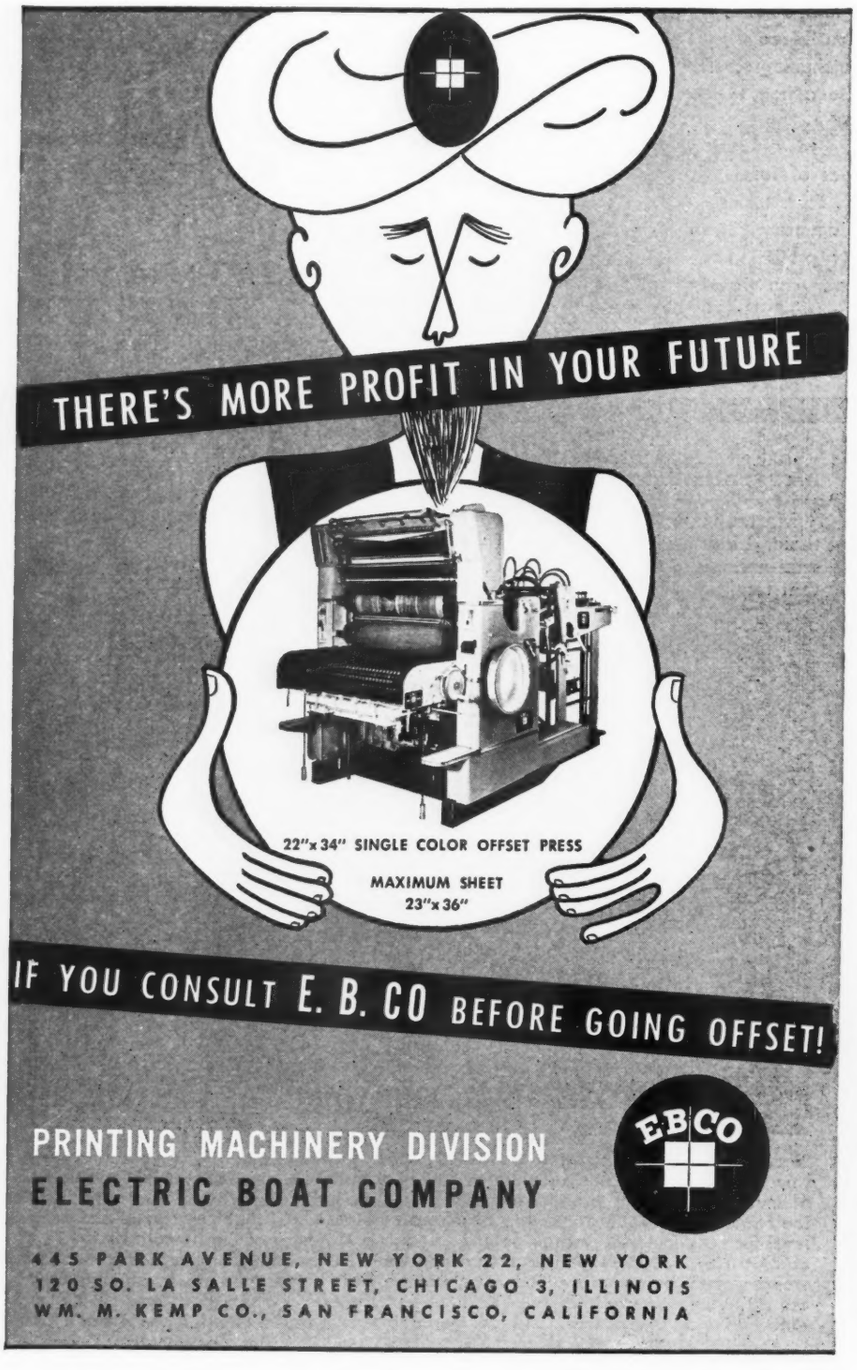
Printing plants which were in operation in 1950 need *not* make reports of quarterly quotas to NPA on materials used for maintenance, repair and operating supplies (MRO). NPA made the explanation because some organizations, apparently misunderstanding Sec. 4 of Reg. 4, have gone to the unnecessary expense and bother of continuing to make reports.

Only new companies which were not in operation last year, or were only in partial operation, need make these MRO reports, NPA emphasized. The procedure for new firms is this:

1. If the organization was in partial operation in 1950, it shall compute the amount it would have spent for MRO for the entire year had it continued at the rate it used the materials during the time it was in operation, making reasonable compensations to establish a fairly representative quota.

2. If a firm was not in operation at all last year, its quarterly MRO quota shall be the minimum amount of MRO which it determines to be reasonably necessary for operation, but not to exceed $5,000 a quarter. If that is insufficient, the organization may make application for an increase.

3. If the quarterly MRO quota is in excess of $1000, a new firm or one in partial operation in 1950 must, within 30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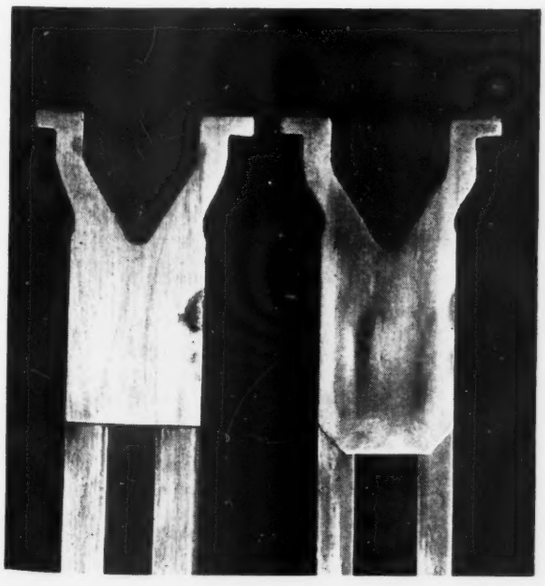
Do YOUR Spacebands accumulate Metal?



1 Sleeve of spaceband showing improper daily rubbing. Note metal accumulation by end of day.

2 Sleeve of properly treated spaceband. Only oxidation stain shows at end of run.

Spacebands should not accumulate metal, but in many plants, it seems unavoidable because of the human element involved. Incorrect method of rubbing and worn pine boards cause the edges of sleeves to become rounded. The result is a metal build-up at casting point.

The HARTCO Spaceband Machine does away with the possibility of rounded edges, and thus metal accumulation is eliminated — Why not look into the HARTCO Spaceband Machine now and save time and money.

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days after its first use of a DO-97 rating, notify the NPA of the quota it has established, the base period used, the method by which the quota was figured and any corrections made for seasonal or other factors.

Improper Use of DO-97

DO-97 ratings, used in purchasing certain materials needed for maintenance, repair and operating supplies, must not be used to build up inventory stocks. NPA said that some wholesalers, anticipating DO-97 rated orders from their customers, are building up stocks in advance to meet this expected demand by extending DO-97 rating prematurely to their own supplies.

This is a violation Reg. 4, NPA pointed out. The wholesaler must not use the DO-97 rating to get replacement items until he has received a DO-97 order from his customer. When he gets such a rated order, it then becomes permissible for him to use DO-97 to replace the item sold.

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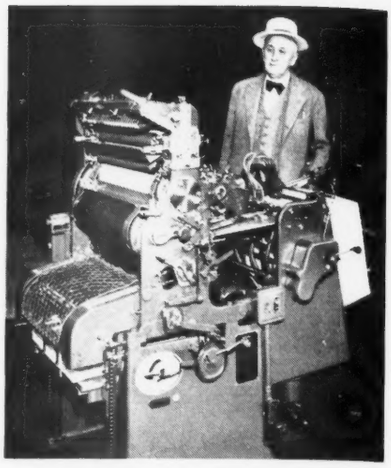
Opportunities exist in the medium and larger plants reached by *Printing Equipment Engineer*. Many of our production executive readers will respond to your Position Wanted Ad in the Classified Section of *Printing Equipment Engineer*. Rates on page 115.



One Thousandth Little Chief—J. E. Webendorfer stands beside one of his developments, the one thousandth Little Chief Offset Press to be built by the Webendorfer Div., American Type Founders. The press pictured above was installed in the offset printing plant of The Revere Copper and Brass Co., Rome, N. Y. The Little Chief has a max. sheet size of 14 in. by 20 in. and speeds up to 5000 i.p.h.

Recent Equipment Reports

Installs Comet

The Alhambra (Calif.) *Post-Advocate* recently installed a Blue Streak Comet Linotype machine. The machine is capable of casting 12 newspaper column wide slugs per minute. Mechanical Supt. Larry Benjamin stated that installation was made mandatory because of a composing room floor space problem and the increased efficiency of the Teletypesetter perforator operators, each of whom is capable of setting between 350 and 500 lines per hour. The *Post-Advocate* has been using Teletypesetter equipment for all of its news matter and much of its classified advertising lineage since May 1948.

Miehle Installations

Press installations recently announced by the Miehle Printing Press & Mfg. Co. are as follows: No. 29 Letterpress, Magill Weinsheimer Co.; Runkle, Thompson, Kovats; Good News Press, Inc.; H. L. Ruggles Co.; Willens & Company; Chief Printing Co.; and E. C. DeWitt & Co., all of Chicago; Perkins Tracy Printing Co., St. Paul, Minn.; No. 56 SC Letterpress, Runkle, Thompson, Kovats, Chicago; No. 46 SC Letterpress, Brethen Publishing House, Elgin, Ill.; Augsburg Publishing Co., Minneapolis, Minn.; No. 41 SC Letterpress, Commerce Clearing House, Chicago; No. 46 TC Letterpress, Brethen Publishing House, Elgin, Ill.; two No. 56 TC Letterpresses, R. R. Donnelly Co., Chicago; No. 6-0 TC Letterpress, Container Corp. of America,

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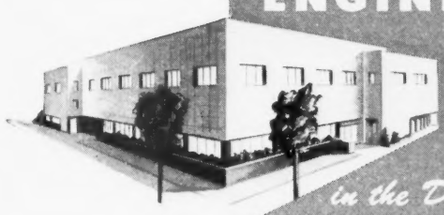

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Installs 52 in. Screen

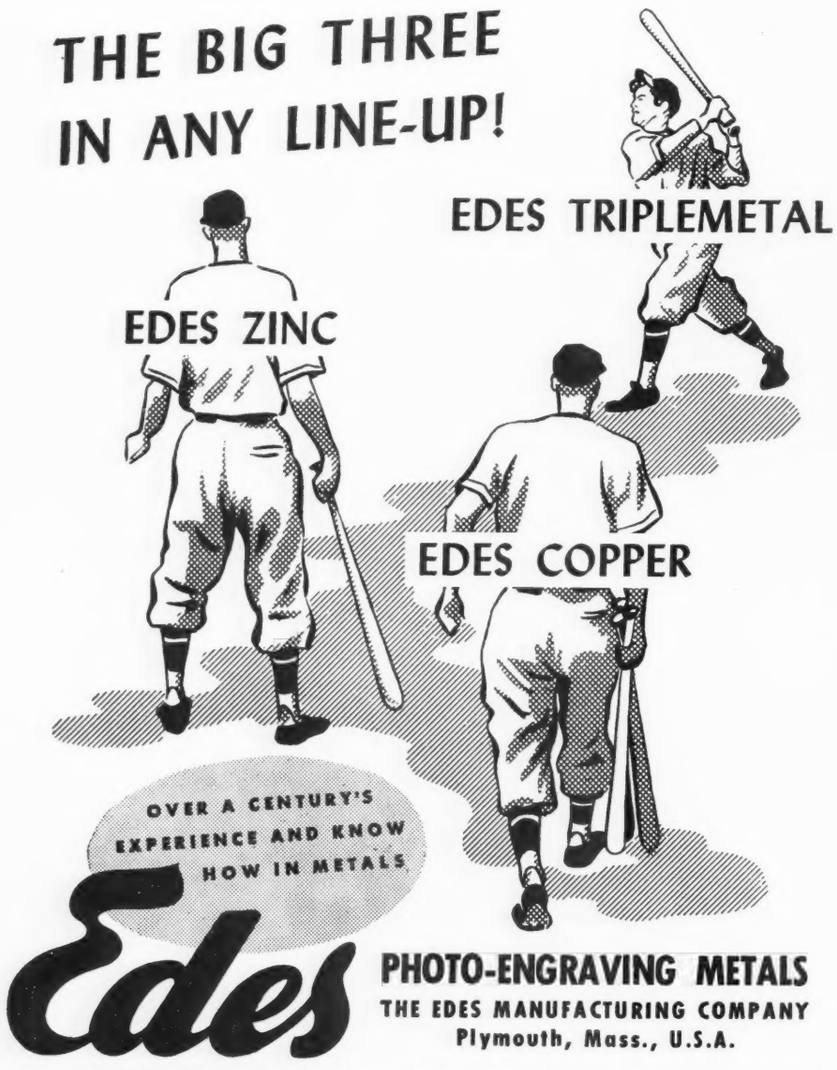
Process Litho Arts, Inc., has installed a 52 in. halftone screen to produce 133 line screen halftones. Equipment used by the firm includes 48 in. proof presses and a 76 in. Rutherford Photo Composing Machine. Visitors are welcome to tour the PLA plant and view the firm's facilities in operation.

E. P. Lawson Co.

Ten installations of Lawson equipment have recently been made by E. P. Lawson Co., according to David W. Schulkind, President. They are as follows: Drill Slotting Machine, School Thrift, Inc., New York; 52 in. Hydraulic Clamp Cutters, J. E. Smith Co., Baltimore, Md.; Lenz & Riecker, Inc., New York; Dependable Bindery Co., Inc., New York; Dixon & Co., Denver, Colo.; 39 in. Automatic Clamp Cutters, Henry Jarisch, Jr., Inc., North Adams, Mass.; Henry W. Plant Co., Inc., Wallington, N. J.; American Lithocraft Corp., Jersey City, N. J.; Square Ruling & Binding Co., New York; and 52 in. Electronic Spacer Cutter, Millers Falls Paper Co., Inc., Millers Falls, Mass.

E.B.CO Installations

THREE recent installations of E.B.CO 22 in. by 34 in., Single-Color Offset Presses were announced by Printing Machinery Div., of The Electric Boat Co. The installations were made at the Mendle Printing Co., St. Louis, Mo.; the Hub Offset Co., Inc., Boston, Mass.; and the Grafica Lito Tecnica S.A., Rio de Janeiro, Brazil.



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NALC Convention

(Continued from Page 65)

On Friday evening a round table discussion on Lithography was offered at the Cleveland Public Library under the sponsorship of the Litho Club of Cleveland and open to the schools and general public. Albert Carl Young, Supervisor of Public Relations and Exhibits of Cleveland Public Library. Speaking on the panel were Henry Prokupek, Sales Representative, Central Lithographing Co., who discussed *Litho Sales*; Andrew Balika, Superintendent, Copifyer Lithograph Corp., who talked on *Plant Supervision*; George Lenzer, Artist-Technician, Photo Color Co., who spoke on *Reproduction Procedures*; and Roy Barnes, Harris-Seybold Co., who talked on *Press Operation*. This was followed by a showing of the Harris-Seybold film, *How to Make a Good Impression*. The Cleveland Public Library was filled with spectacular exhibits for the week. The assembling was done under the supervision of Mr. Lenzer.

On Saturday morning and early afternoon the general business was concluded, and the Technical Information Centers were set up in the ballroom for informal conferences the rest of the afternoon.

Officers of NALC for the coming year were elected as follows: Anthony Capello, Philadelphia, President; Herbert H. Johnson, Cleveland, First Vice President; John F. Maguire, New York, Second Vice President; C. Frank Peterson, Cincinnati, Treasurer; and Joseph H. Winterburg, Philadelphia, Secretary. The retiring president, Edward W. Harnish, continues as a member of the Council.

It was decided to hold the 1952 convention in Philadelphia. The NALC expansion plans for the year encompass a membership drive, more Council meetings, at least five issues of the association paper, and the listing of more audio-visual material and available speakers for club meetings.

G-W HANDLES ups and downs THE EFFICIENT WAY

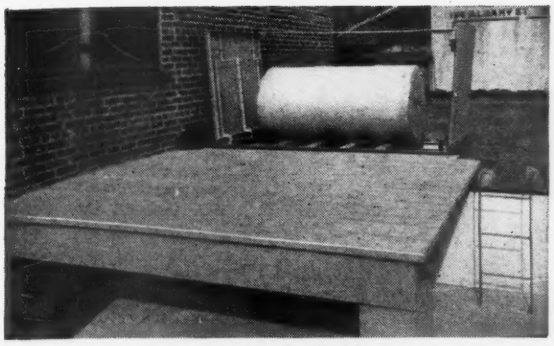

Figure I—Loading Position

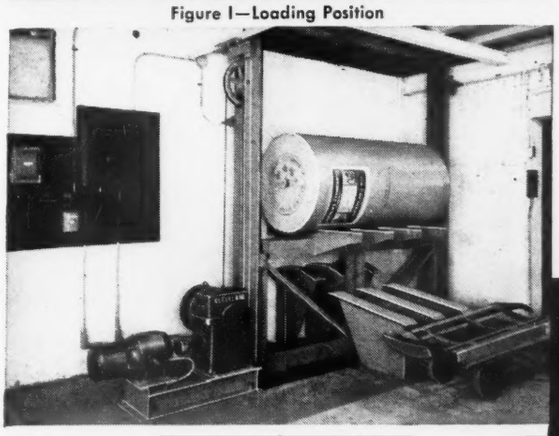

Figure II—Discharge Position

7635

Heavy newsprint rolls take and often give a beating on their way from truck to storage or press room. Cumbersome . . . unwieldy—they can be dangerous to handle and easily damaged.

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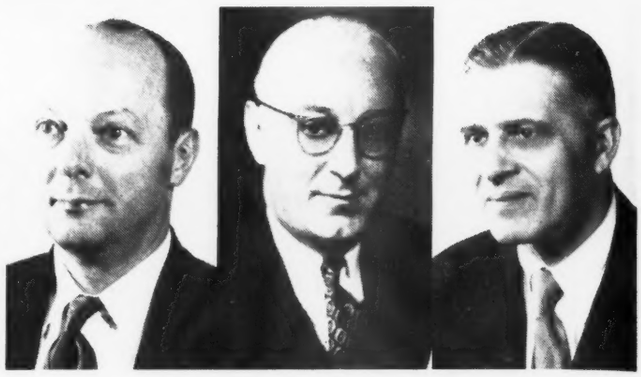
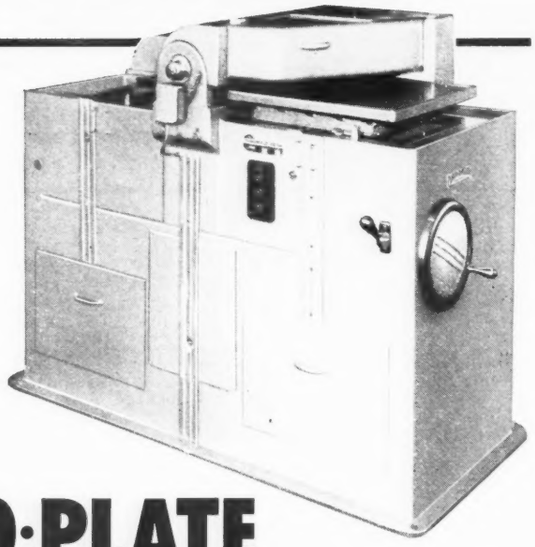
EXECUTIVE Cs

Edwin B. Hundley, branch manager at Buffalo, N. Y. for American Type Founders for the past five years, has been transferred to Atlanta, Ga., as Manager of ATF's branch in that city. Hundley succeeds Edgar A. Fowler who retired recently after 29 years of service with ATF. According to the announcement, Walfrid H. Williamson becomes Buffalo Branch Manager. Williamson started in the shipping department of ATF's Chicago branch 14 years ago, and has served as salesman and branch manager in Portland, Ore.



Millard J. Friday, sr., (left) has succeeded Robert L. Kielich (center) as head of the E. W. Blatchford Branch of National Lead Co. Albert J. Monaco will assist in managing the branch's sales. Kielich, who joined the Blatchford organization in 1908, is retiring from the company. Friday started work with the firm in 1920 and has since engaged chiefly in sales and service for the company. Monaco has been associated with Blatchford for 28 years.

Saving ON SHAVING!



Dollar for dollar the new Model D Plane-O-Plate Rotary Shaver is the best value on the market today.

New PLANE·O·PLATE ROTARY SHAVER

THE NEW Monomelt Plane-O-Plate is a precision, high speed rotary shaver for metal, wood and plastic. Its amazingly low cost and high work output makes it ideal for newspapers, photo-engravers, stereotypers and plastic plate makers.

The new Plane-O-Plate is rugged and dependable. Cutter head is molybdenum steel mounted in Timken bearings. The body is made of stress-relieved welded steel, heavily reinforced. Substantial cuts are made without vibration or chatter. The Plane-O-Plate will shave a full page plate, a single small plate or a bed full of small plates at one time. Shaving capacity is from .150″ to 1″ . . . to .055″ with auxiliary plate, available at a small extra charge. Safety features protect operator, plates and machine.

Plane-O-Plates are still available. See your dealer, or wire, write or phone for folder of complete information.

THE MONOMELT CO., Inc.

1611 N. E. POLK ST. • MINNEAPOLIS 13, MINN.

Kenneth R. Burchard has been named Professor of Printing Management and Head of the Dept. of Printing Management, Carnegie Institute of Technology. The appointment became effective June 1. Professor Burchard carries an A.B. degree from William Jewell College awarded in 1928. He is married and has two children. John Kenneth age 15 and Verna May age 6. From 1940 to 1943 he was a member of the teaching staff, Carnegie Dept. of Printing Management. Since 1944 he has been Manager of Offset and Photomechanical Sales, American Type Founders. Professor Burchard is a recognized authority on photomechanical reproduction. In his previous association with Carnegie Tech he taught letterpress and offset production methods. He has been a frequent contributor for several years to the trade press on photomechanical technical subjects.

The Cro-Plate Co., Inc. Hartford, Conn., hard chrome platers and manufacturers of metal finishing and plating equipment has announced the appointment of Richard J. Dunne as Eastern Div. Sales Engineer in the New York and New Jersey area. Mr. Dunne comes to Cro-Plate from the Cylinder Plating Corp., New York where he was concerned with copper plating to rotogravure printers.

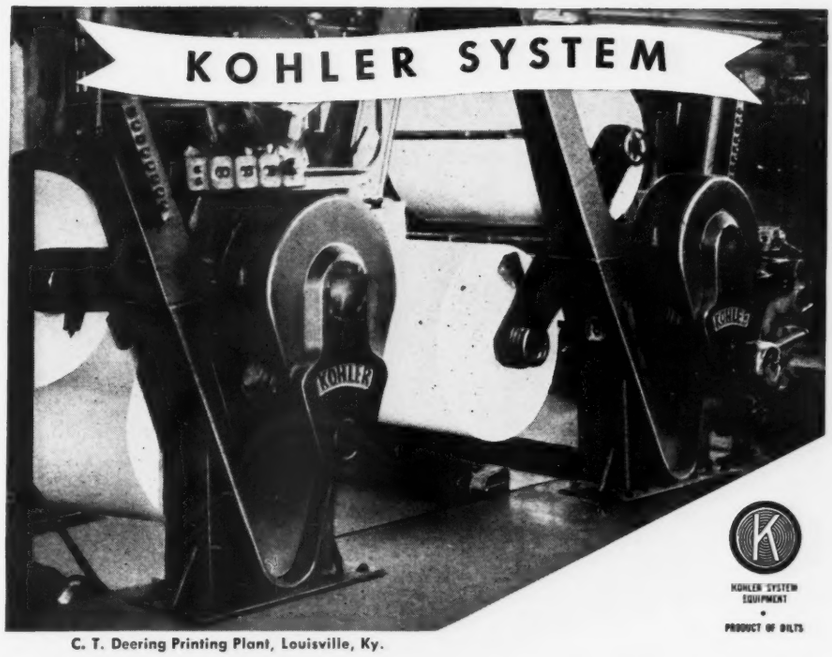
The appointment of W. G. (Wally) Sulzer, jr., as Assistant Branch Manager of the IPI Richmond, Va., Branch under John Osias, has been announced by Robert Kuhn, Vice President of International Printing Ink. Sulzer, a veteran of World War II, has been with IPI since 1937. He attended the University of Virginia and the University of Cincinnati. He worked in sales for the company in the Dayton, O., territory prior to his present appointment.

David Higgins, formerly sales manager, has been appointed General Mgr. of the Machinery Div., Hambro Trading Co. of America, Inc. It was announced that the executive offices of the division have been moved to the Empire State Bldg., 250 Fifth Ave., New York. Showrooms, servicing and demonstration facilities will remain at 27 W. 20th St., New York.

Wilford R. Coddington, who has been composing room superintendent of the Youngstown (O.) *Vindicator* for a number of years, has been named Mechanical Supt. of the Des Moines (Ia.) *Register* and *Tribune*. Mr. Coddington assumed his

W. R. Coddington Luke Dougherty

duties on April 26. He is an immediate past president of the Great Lakes Mechanical Conference. He has made a number of addresses throughout the country and has been generally useful in propagating better composing room management methods. He is well and favorably known to a considerable num-



C. T. Deering Printing Plant, Louisville, Ky.

ever watch a Kohler splice it on the fly?

If a layman knows in a general way what is going to happen, a "flying paster" in operation is just about the most breathless spectacle that occurs in a printing plant.

The expiring roll grows smaller and smaller. The reel is automatically turned to bring a fresh roll in contact with the old one. Soon the surface speed of the two webs becomes synchronized. Momentarily, the situation becomes more tense. Will the splice succeed?

The reel tender presses a button. A bell rings. Then zip!—and the new web speeds through the press. It happens so suddenly that you can't watch the splice and the knife at the same time. You have to observe the operation repeatedly to see the various steps.

Shops that do high-speed web printing can't afford to stop for hand pasters. The Kohler Flying Paster saves so much press time that it quickly pays for itself.

Ask for complete information.

Dilts
MACHINE WORKS
FULTON, NEW YORK

SHARTLE BROS. MACHINE COMPANY, Middletown, Ohio
Division of THE BLACK-CLAWSON COMPANY, Hamilton, Ohio
Western Sales Office: Mayer Building, Portland, Oregon
Southern Sales Office: 937 Coventry Road, Decatur, Georgia
Associate: ALEXANDER FLECK LIMITED, Ottawa, Canada
Subsidiary: B-C INTERNATIONAL, LTD., Greener House
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ber of ANPA newspaper mechanical executives. He is succeeded at the *Vindicator* by Luke Dougherty who has been Coddington's assistant for some time. Mr. Dougherty is a graduate of Carnegie Tech. Printing Dept. Mr. Dougherty is known for his composing room management techniques.

C. William Ullrich, formerly with the National Process Co., has become a partner and Vice President in Charge of Sales of Alumni Offset, Inc., New York.

Many of our production executive readers will respond to your Position Wanted Ad in the Classified Section of *Printing Equipment Engineer*. Rates on p. 115.

Wrapping Paper Div. Sold

Paper Manufacturers Co. has announced that the entire inventory of the Wrapping Paper Div. has been sold to W. B. Killhour and Sons, 10 Chestnut St., Philadelphia 6. Members of the Wrapping Paper Div.'s sales force will now be affiliated with Killhour under the sale. The move coincides with the merger of the Killhour firm with the Hubbs Corporation, New York. As previously announced, the Paper Manufacturers Co. is presently erecting a modern one story plant of 200,000 sq. ft. at Bustleton, Philadelphia as well as a one story plant of 40,000 sq. ft. at Indianapolis. Both plants will be devoted to the manufacture and conversion of Perfection small paper rolls and Perfection flat gummed papers.

Emergency Rule

Being engaged on the molder a considerable part of the time, I have use for a printer's makeup rule. Recently, the rule became misplaced. In the emergency, I made one out of a section of steel stereotype molding board 0.036 in. thick. After scribing the steel board to the usual shape of a makeup rule, the rule was cut out and finished with a pair of husky snips, a hard grinding wheel and some emery cloth.—Earl Cole, Stereotype Foreman, Wilkesbarre (Pa.) *Times-Leader-Evening News*.

here's how Rouse REDUCES YOUR TIME COSTS

CUT A FULL GALLEY OF MIXED MEASURES SLUGS IN ONLY 35 SECONDS

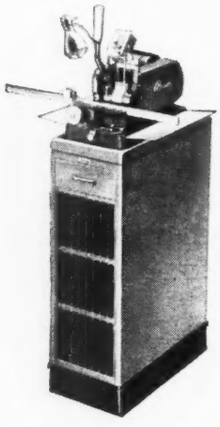
Rouse BAND SAW

No more gauge setting! No more reclamping or measuring! That's why the Rouse Band Saw offers you by far the most economical way to accurately cut slug lines to different measures in the shortest possible time. No other machine nor method can even come close to this achievement.

If you operate one or more linecasting machines on variable measure composition, the Rouse Band Saw will do the work of hours in minutes. Expensive time saved will be unusually great in work requiring frequent changes in line measures, such as ad work, catalog runaround work, etc.

CUT 1000-1200 ACCURATE MITERS IN ONLY 1 HOUR

Rouse POWER MITERER



If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters from strip material. That's how the Rouse Power Miterer can slash your time costs by doing work in minutes that now takes hours. It quickly pays for itself in expensive time saved.

From the smallest job shop up to the largest plant, only Rouse makes a Power Miterer for every type of use. Can be bought as a bench model or with any other equipment you wish.

Call your dealer today or write for illustrated folder.

Virtually every printing plant in the world uses one or more Rouse Time-Saving Products for Printers

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MITERING MACHINES
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COMPOSING STICKS
TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

ROUSE PRODUCTS—THE STANDARD OF THE WORLD FOR 50 YEARS

Matrix Contrast

(Continued from Page 58)

with a minimum of errors. That in itself is a substantial detailed recording job, particularly as each serial number on each matrix must be checked with the color chart to see what color goes on what matrix. The customers' orders go through the plant as one piece. It could and does happen that on some sort orders, three or four different colors have to be applied to that order. Every separate operation is inspected and checked.

The shipment is next wheeled into the processing laboratory which is an immaculate labyrinth of stainless steel fixtures and exhaust pipes. The matrices are first washed in water; or if tarnished, ammonia is added. Next, the matrices are buffed with a wire brush to make them clean as a hound's tooth.

The matrices are immersed in a bath which oxidizes (blackens) the brass on the reference mark face of the matrix. The matrices are then carefully dried in an electric oven and buffed again with a bristle brush. They are now ready to have the contrasting white or color pigments applied.

The contrast department applies the proper color to the reference marks as set forth in the order that was made out when the matrices were received. Then they are returned to the shipping room to be sorted and put in their original receptacles and shipped to the proper people.

Reprocessing Matrices

The original processing of a new customer's matrices, as well as the periodical in-plant re-processings, are handled by trained service crews with portable processing equipment. They are prepared to work in a plant day or night at a time that does not interfere with the regular production schedule. All they need is running water and a standard electrical outlet, and they are ready to go to work with their three trunks full of portable equipment. Each set of equipment costs originally over $2 thousand.

The same meticulous routine in reprocessing is followed in the user's plant as that described for the New York plant with one exception. Black and white and colored matrices that are to be reprocessed first are washed in a detergent solution to loosen the old contrast pigment in the reference mark depression. They are then buffed with a brush, treated in the oxidizing bath, electrically dried, buffed with a bristle brush and the proper color for that particular font is applied.

Matrix Contrast Corp. is still expanding its facilities which now include 6 service branches and 31 trained service crews.

What's a Colloid?

By RESEARCH STAFF*

**Lithographic Technical Foundation*

AS a reader of books and articles on lithography you probably have often seen the word "colloid". In general, lithographers know that "colloid" is used in referring to materials like albumin, gum arabic, casein, and glue. But what "colloid" means in itself is not generally known except to chemists.

According to an explanation recently offered by the Lithographic Technical Foundation, chemists recognize three different kinds of mixtures. These are "true solutions", "colloidal solutions", and "suspensions". The only difference between them is in the size of the particles of the material that is dissolved or suspended in the solvent or liquid. When the suspended particles are liquid the mixture is called an "emulsion".

Salt dissolved in water forms a "true solution" because the salt breaks down into its smallest possible particles, namely, molecules and ions. These become completely dispersed in the water. True solutions will pass through a membrane (a thin sheet of cellophane, for example) carrying the dissolved materials with them.

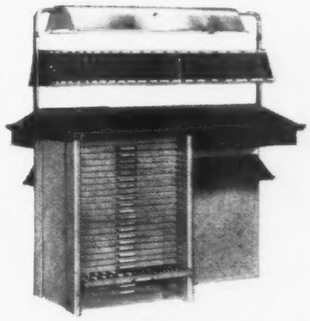
"Suspensions" are on the other end of the scale. Here the dispersed particles are large. Muddy water is a suspension since the particles of solid material are usually large enough to settle out on standing. Paints and inks are also suspensions. The particles of pigment in them can usually be seen under a high-power microscope.

In between "solutions" and "suspensions" are the "colloidal solutions". These are dispersions of particles that are larger than ordinary molecules but not large enough to be seen under a microscope. The particles are too big to pass through membranes but not big enough to settle out. They may be groups of molecules or even very large single molecules. Dispersions of this type act differently in many ways from solutions and ordinary suspensions. Because of this

By use of lights fastened to the make-up man's hands, the camera offers a record of the money-making motions involved in making up a simple form.

Chasing after leads, rules, slugs and other materials is a good way to chase profits right out of the composing room. And because Hamilton knows that time wasted in this way is time and money lost, Hamilton type cabinets are designed to keep all working materials within arm's reach. That's one more reason why we say *Hamilton equipment gives good men a chance to do good work!*

★ ★ ★ ★ ★ ★ ★



Hamilton Adman Cabinet No. 135C01

An unusually efficient double-side cabinet assembly, in profitable use all over the country. Overall floor space dimensions 72¼" x 37¾". Normally furnished with 48 Standard-Depth California Job Cases, but a variety of other cases are available. Complete flexibility and a wide range of optional equipment permit you to tailor this cabinet for most efficient make-up or composition use in your plant. For full details, consult your Hamilton Catalog or Dealer.

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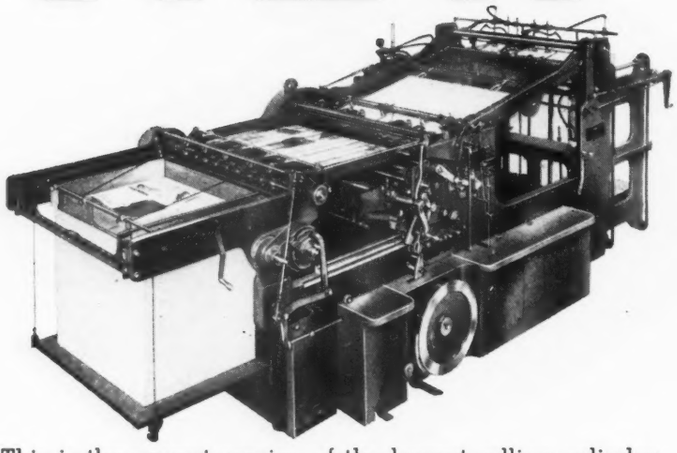
Today, more than ever, your Hamilton Dealer is a mighty useful man to keep in touch with. He's well posted on N.P.A. regulations and can help you fit your equipment requirements into current delivery schedules. But since more time *is* required now, see him soon!

Hamilton PEAK-PRODUCTION equipment

HAMILTON MANUFACTURING COMPANY • TWO RIVERS, WISCONSIN

NEW



This is the newest version of the largest selling cylinder press of or near its sheet size, in the world — The Miller 27 x 41 SY. Generous increases over its previous model in impressional strength and ink distribution place it a step beyond former ideas of printing press quality. Write for a catalog.

MILLER PRINTING MACHINERY CO.
1103 REEDSDALE STREET • PITTSBURGH 33, PA.

they have been classified separately and are called "colloidal solutions" or "colloidal dispersions".

Many materials apparently dissolve in water and yet do not form true solutions. Gum arabic, cellulose gum, albumin, casein, glue, and gelatin are of this type, as well as soaps and many of the dyes. To distinguish them from materials that form true solutions they are called colloids.

LTF has found that some of the lithographer's troubles result from combination mixtures. For instance, plate coating solutions are often a combination colloid-suspension. Solutions that are completely colloidal dry down as a very smooth, even coating. But, the coating produced by a solution that also contains suspended matter that will not dissolve, produces imperfections such as spots and comets.

for Better Plates! Better Printing!

★ CENTRIFUGAL CASTING PROCESS for curved electrotypes
★ HYDRO-CASTER for flat electrotypes

These new methods of manufacturing electrotypes are available to you—for further information write

Printing Plate Supply Company

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Some colloidal solutions can be mixed with other colloidal solutions without destroying the colloidal particles. For example, gum arabic solutions can be mixed with cellulose gum solutions. But if a gum arabic solution is mixed with an albumin solution, the colloidal solution is destroyed to a large extent and the material precipitates or settles out of solution as a solid.

This is all. There are no mysterious meanings in the word colloid. But when it comes to explaining why colloids act as they do in lithography, then you encounter mysteries that have puzzled chemists for years.

Progress Report

Through Executive Director Frank M. Sherman, the Intl. Typographic Composition Assoc. has issued Research Bulletin No. 9. The bulletin pertains to transparent proofs and transparent adhesives. It might be called an up-to-date progress report containing information from ITCA's special committee which has been working on this type of proof for the past year.

It is reported in the bulletin that "the final obstacle—the necessity for dusting proofs with lamp black, black iron oxide, bronze powder or some other dusting material—has been overcome and that it is now no longer necessary to dust proofs to secure opaque impressions."

Also reported is the statement: "There is not yet a royal road to perfect transparent proofs . . . and there may not be such a road—ever. However, the equipment, materials and methods of operation listed are producing satisfactory proofs on transparent materials without dusting in plants of members of the ITCA committee."

Listed in the bulletin are the equipment, materials and procedures for taking transparent proofs and for applying transparent adhesive to transparent proofs.

Due recognition of the importance of the human element is taken. Also, appears the statement: "There must first be present the ability to know when a proof is or is not good. . ."

It seems to this reviewer that a tremendous amount of study and effort has been expended in developing the techniques discussed in the bulletin.

Differentiate In Your Addresses

In recent times, the Lithographic Technical Foundation has been afflicted with growing pains. These are caused by people making inquiries at the New York address when they should be sent to the Chicago Research Center, and vice versa. Executive Director Wade E. Griswold explains that when so many requests are sent to the wrong department it takes a barrel of office work to forward them to the other branch and consequently results in delayed service to the party seeking help.

Inquiries regarding certain subjects should be sent to Lithographic Technical

Foundation, Glessner House, 1800 So. Prairie Ave., Chicago 16, Ill., as follows: (1) Laboratory investigations, (2) Reference library, (3) Library, photocopies, (4) *Research Progress*, (5) Research, (6) Technical advisory service, (7) Plant advisory service, (8) Abstracts technical articles.

Inquiries related to the following subjects should be sent to Lithographic Technical Foundation, 131 E. 39th St., New York 16, N. Y.: (1) Administration and planning, (2) Membership contacts, (3) Information for "Sponsored Men" program, (4) Forums and speakers, (5) Educational programs, (6) Publication of final research results, (7) Audio Visual service, (8) LTF publications, (9) Public relations.

Materials Handling

(Continued from Page 84)

The hauler's teammate, driving a small roll handling truck with curved metal arms, then grabs the roll, turns it on its side in mid-air, and places it on a semi-trailer truck.

This whole operation takes about 30 sec., and the big truck is loaded to its capacity of 15 full-sized rolls, double-tiered, in less than 10 min. This is about four times as fast as the time required to do the job by hand and virtually eliminates all damage.

When the load is driven to the *Star* and *Tribune* building, a roll at a time is lowered into the basement. The rolls are then picked up again by an Elwell-Parker Lift Truck and either placed on concrete platforms ready to be rolled into the pressroom, or stored on end in a reserve storage area where a one-week emergency supply of paper is maintained.

Under the new system, a two-man crew of paper haulers manages to unload about 200 rolls of newsprint (nearly six boxcars full) in each 8 hr. shift.

Time to Re-appraise

Stating that he was making some comments "on my own" before the Toronto Club of Printing House Craftsmen in April, F. W. C. French, Asst. to Vice Pres., Lanston Monotype Machine Co., discussed briefly an illustrated article which appeared in a recent publication. He made the comments as an individual previous to addressing the Toronto Craftsmen formally as a company representative.

In part, Mr. French said: "A . . . publication devoted two pages to an illustrated story about a man who a year ago was a dealer in rags (*sic*) and today is said to be firmly established in the printing business. The illustrations show a machine-like typewriter, an office offset machine, and a person with a platemaking device.

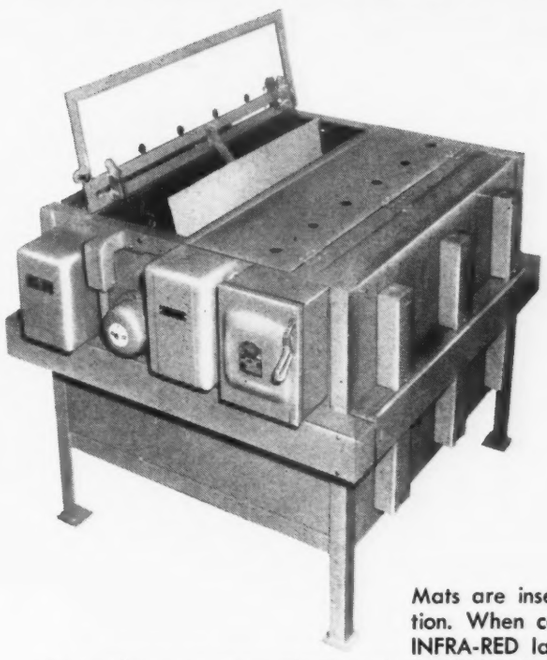
"If the time has come when a man with no printing experience, either letterpress or lithographic, can set himself up solidly

SAVING NEWSPRINT... *with* HIGH SHRINKAGE MATS?

If so . . . improve printing quality with

ALICO EVENRAY MAT DRIER

INFRA-RED drying with UNIFORMITY to PRE-SHRINK and SET MOULD DEPTH



Mats are inserted in vertical position. When cover is closed twelve INFRA-RED lamps (6 each side of the mat) turn on automatically and **specially designed gold reflectors** direct the heat with equal intensity and uniformity against both sides of mat. At end of drying period lamps turn off automatically and a bell rings.

Check these Special Features

★ INFRA-RED Operation ★ UNIFORM heating ★ Completely automatic
★ Final shrinkages up to 1⅛″ per page
★ Electrical timer for periods from 5-120 seconds
★ Pre-drying time from 25-50 seconds ★ Size is 3′ x 3′ x 30″ high
★ Eliminates slippage and buckling of packing.

Present Users

Chicago Daily News
Daytona Beach News-Journal
Detroit News
Dixon Evening Telegraph
Flint Journal
Hartford Courant
Minneapolis Star Tribune
New York Herald Tribune
St. Louis Post-Dispatch
Washington Evening Star

WRITE FOR COMPLETE INFORMATION

ALICO · INC.

850 BIRNIE AVE. WEST SPRINGFIELD, MASS.

in the printing business within a year, without engaging the services of a crew who have served a more or less sound apprenticeship, then it is time for us to re-appraise our own positions.

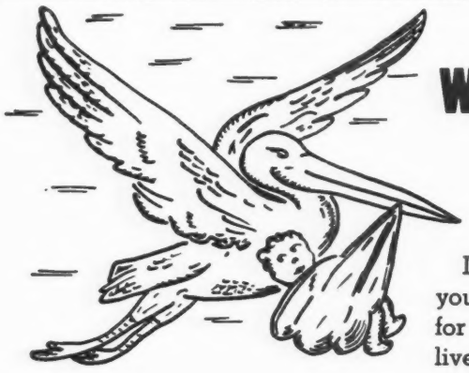
"The great supply houses of America have spent millions of dollars in the development and sale of the finest typographic resources the world ever saw; and American printers have bought the products of these factories by the hundreds of millions. This equipment is operated by and under the supervision of men, each of whom has spent years in the study and practice of his branch of the industry . . .

"It is a problem for which I do not have a solution, although I am keenly aware that it is a problem."

Government Night

Nearly 200 members and guests of the Washington Club of Printing House Craftsmen gathered recently in the Government Printing Office to observe Government Night. Washington Club President, Morris H. Reaves, presided, and Public Printer John J. Deviny acted as toastmaster. Principal speaker of the evening was Willard A. Anderson, Plant Engineer at the GPO, whose subject was *Functional Use of Color in Improving Working Environment.*

Under scientific treatment, the drab buffs and battleship grays, ordinarily used in printing plants, have been changed at the GPO to shades of peach, blue, green and yellow with contrasting trim. Machinery and furniture has been painted either light gray or tan. Anderson related that the experience at the GPO has demonstrated that clean, well-lighted, well-ventilated, reasonably quiet and pleasant room conditions are reflected in more cheerful employee attitudes and dispositions. He quoted GPO's comptroller as authority for the statement that in one workroom the costs of redecorating and lighting were recovered in a single year by reason of improved worker morale.



WAITING FOR DELIVERY?

If it is something in our line, your hours of anxiety may be over, for we are offering immediate delivery on name brands of new equipment.

Delivery from Stock on Name Brands of New Machinery. Orders filled in sequence received.

COMPOSING ROOM

1—36 pt. Master Model Rouse Vertical Miterer
1—No. 2 Rouse Band Saw
1—Model 3A C&G Saw Trimmer
1—Model 45 C&G Saw Trimmer
1—Model 45 Special C&G Saw Trimmer
1—Nolan Chief Saw
1—Nolan RP-5 Radial Router
1—Nolan RP-4 Router
1—Nolan Proof Press, form size 12½x20
1—Nolan Proof Press, form size 25¼x34
1—Vandercook Proof Press, form size 12½x35
3—Universal Mono Tabular Broaching Machines

PAPER CUTTERS

1—30½" Challenge Diamond, Hand Clamp Power Cutter
2—36½" Challenge Diamond, Hydraulic Clamp Power Cutters

PRESS ROOM

1—12x18 Chandler & Price Automatic Unit
1—8x12 Chandler & Price Platen Press
1—10x15 Chandler & Price Platen Press
1—12x18 Chandler & Price Platen Press
1—Paasche No Offset Spray, 28", 42", 84"

BINDERY

1—28" Rosback Pony Rotary Round Hole Perforator
1—30" Rosback Slot Rotary Perforator
2—Rosback Hi Pro Drilling Machines
1—Style M Challenge Bench Model Drill
1—Acme Champion Stitcher, ¼" capacity
1—Acme Morrison Stitcher, ¾" capacity
1—12" Straight Arm Box Stitcher

All Items Subject to Prior Sale

WRITE, WIRE OR PHONE YOUR ORDER TODAY

The M. L. ABRAMS *Co.*

Printing Machinery and Supplies

1729 SUPERIOR AVE. CLEVELAND 14, OHIO

Spot Carbon Printing

M. S. KANTROWITZ, *Chairman, Research Committee, Washington Club of Printing House Craftsmen.*

THE objective in spot carbonizing is to float a film of ink on the surface of the paper, producing as little penetration as possible. The selection of stock is of great importance. It should possess opacity and a good smooth surface finish without being too thin or too porous. All printing and rule work should be done on this paper before the reverse side is carbonized.

The form should be made ready with a kiss impression to avoid forcing the ink into the paper stock. Only enough ink to cover should be carried. The usual roller setting should be used. The ink is very buttery and will not flow easily, so that automatic ink agitators are necessary in the ink fountain. Otherwise, constant knifing of the ink towards the fountain roller will be necessary.

The carbon printed sheets should be racked in lots of not more than four or five hundred and left undisturbed for seasoning for 4 to 5 days. With proper makeready and the correct amount of ink, slipsheeting is not necessary.

Subsequent handling such as numbering, cutting, gathering, padding, folding and wrapping must be done with extreme care to avoid offsetting. When the job is cut in the bindery, a special clamp should be placed on the cutting machine to eliminate the pressure on the carbon print.

When carbonizing was performed in the Government Printing Office, the ink consisted of the following formula:

	Percent
Carbon Black No. 2	22.0
Toning Blue (Color Index No. 221)	3.0
Hydrous Lanolin, U.S.P.	15.0
Red Mineral Oil	60.0

Five per cent of paraffine wax and ten per cent of rosin oil varnish may be substituted for a similar proportion of the red mineral oil in order to obtain somewhat varying properties of penetration of this ink.

Discuss Rotary Presses

A discussion of rotary letterpress printing presses from the standpoint of costs, type of work best handled, and history and design of such presses was included on a program presented at a recent meet-

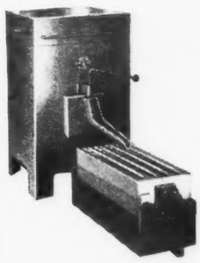
Everything . . .

for the

REMELTING DEPT.

THE NOLAN MELTEVATOR

Step up the efficiency of your remelting department by installing a Nolan Meltevator . . . the automatic pot loading attachment that saves time, money and work. Compact, simple and efficient, this device will pay for itself quickly. Available for use with any furnace.



NOLAN REMELTING FURNACE

The Nolan metal remelting furnace is a complete unit carefully designed to provide fast, safe and efficient metal remelting. It is available in several sizes from 600-lb. pot capacity to 10-ton. Thermostat heat control and all automatic features are available.

NOLAN SCRAP TRUCKS

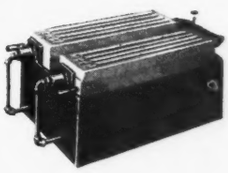
Sturdily built, long-lasting composing room. Special sizes made to order.

NOLAN WATER COOLED MOLD

The Double-4 ingot mold has a capacity of eight split-ear drop-off type ingots, four on each side of the mold. Monotype blocks or molds for special shaped ingots can be made on special order.

NOLAN TWIN TYPE MOLD

For greater production in repigging, the Nolan twin-type mold gives maximum ingot capacity. Two double-4 molds mounted on a single frame gives 16 standard ingot cavities.



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Manufacturers of Finest Quality Printing Equipment

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NEW BUILDINGS
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WON'T DO IT!
The really important ingredient in printing plant construction or remodeling is the proper integration of every production element. The lowest unit cost can only be achieved through carefully engineered, mechanical processes, operational procedures and layout.
If your problem is the analysis of any single production phase or a master plan for an entire plant, a Runion engineering survey can find the answer.
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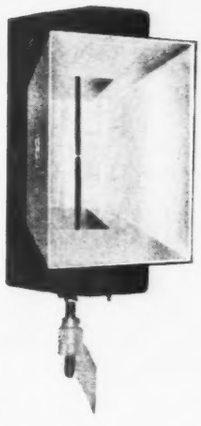

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Models for every purpose in camera and printing work. Write for brochure.

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World's standard photo lamps since 1909

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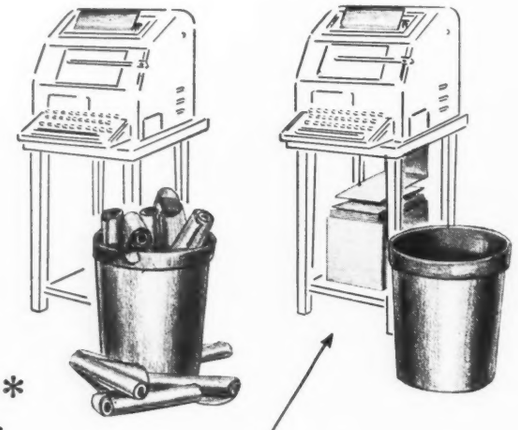
ing of the Chicago Club of Printing House Craftsmen. Those participating in the program included Stephen N. Hutins, Chicago Printing Consultant; Carlton Mellick, Vice President in Charge of Sales; and Henri E. Peyrebrune, Vice President in Charge of Engineering, all of Miehle Printing Press & Mfg. Co.

Questions were asked by a panel consisting of John Bernhard, Vice President, Dexter Press; Harry Vested, Owner, The Mart Press; and Fred Ladwig, Production Manager, John Maher Printing Co., all of Chicago. Answers were given by a panel made up of Herbert Chandler, Chief Engineer of Miehle's rotary press division; Anthony Kotek, Miehle Technical Advisor on rotary press problems; and Mr. Hutins.

Fluorescent Papers

Switzer Bros., Inc., has succeeded in coating paper with its full range of fluorescent colors for use with high speed printing processes, according to the March 27, 1951, issue of the Cleveland *News*. It is reported that the fluorescent coated papers will open up a wide field of use for direct mail material, brochures and pamphlets, magazine inserts, and packaging.

Heretofore, use of Switzer Day-Glo colors in advertising has been limited to posters and displays which could be printed by silk screen. This still is true because only by the silk screen process can the ink be applied thick enough to be effective. But by reversing the process—by using Day-Glo coated paper and running it through offset, rotary or cylinder letterpress presses using conventional inks—the characteristic brilliance of the fluorescent colors can be imparted to virtually any printed matter. Available only in limited quantities at present, the new coated paper will be released to printers under licensing agreements.



A TALE OF TWO WPB's*

PERFECTION FOLDED
TELETYPEWRITER PRINTER PAPER
MAKES THE DIFFERENCE

Especially suitable for Teletypesetter monitoring service.

NO WASTE: All usable paper. No leftover cores or unused paper at either end of roll.

NO FUSS: Eliminates message interruptions due to roll changes. Requires less storage space.

NO BOTHER: Saves attendant's time because less surveillance needed. Eliminates curl found in roll stock.

*WASTE PAPER BASKETS

The World's Leading Brand of Communication Papers

Perfection® IS YOUR PROTECTION

Modernization Program

(Continued from Page 80)

machine at the Feather plant was specially designed to handle a minimum size signature measuring 4¼ in. by 6¾ in. This is claimed to be the smallest size book ever handled by this machine and was designed to accommodate the syndicated publications produced by the William Feather Co. The minimum size signature handled by the standard Type 4D model is 7½ in. by 5 in. Maximum signature size is 16 in. by 11 in.

The signatures are stacked in the hopper with the binding edge down and the open or lapped edge up. A sucker bar is employed to draw the binding edge out to a double gripper which pulls the signature completely down and out of the hopper. Two main drum grippers then grip the entire signature at the open or lapped edge.

Each drum has two sets of grippers so that every revolution of the drum draws down two signatures separately and in succession. When the signature is partially withdrawn from the hopper, a second pair of lap grippers close on the lap and hold it until the signature is opened far enough to drop over the saddle.

In the meantime, the main grippers have been opened releasing the short side of the signature. The short side then meets a pair of opener grippers on a smaller drum which open the front of the signatures. The signature is opened so it will drop onto the false jogging saddle when the grippers are released.

From this false saddle, the signature is advanced by pins, projecting upwards at spaced intervals, on a conveying chain. The chain receives signatures from the other three stations on the machine in the same manner to form the complete book. These pins are spaced 21 in. apart for signatures up to 15 in. in length and 24 in. apart for signatures over 15 in. in length.

Micrometer Attachment

As the book travels along the conveyor chain with the assembled signatures it passes through a micrometer attachment before receiving the wire staples in the stitching mechanism. This attachment is set before the run is started to the thickness of the particular book being processed by the machine. It serves as a means of rejecting books which have received too many or not enough signatures. An example of this would be in the case of

the operator at the signature stations letting one of the boxes run out of signatures.

The micrometer attachment does not shut the machine off if an imperfect book passes through it. Instead, it allows the imperfect book to continue its travel into the stitching apparatus, at the same time tripping the stitcher heads so as to prevent the book from being stapled. Upon emerging from the stitcher at the end of the conveyor, a reject trip drops the imperfect book down to a reject box under the machine on the floor. The machine continues to process books having the required signatures without any loss of production.

Floor space of the four box Sheridan machine without stitcher or delivery is 99 in. by 56 in. Weight of the machine is 3400 lbs. Rated speed on minimum size books is 90 to 110 books per min. and on maximum size, 85 to 110 books per min. The Christensen stitcher attached to the machine is designed to accommodate up to four stitching heads. Motor for the main drive with stitcher is 5 h.p. Drive shaft speed is 450 to 600 r.p.m. or 90 to 120 books per min. A 2 h.p. vacuum pump motor is designed for machines with up to six boxes.

Trimmer Makes Three Cuts

The Sheridan A-T Single Book Trimmer is designed to operate in combination with either the Sheridan Inserter or the Sheridan Tabloid Gathering-Stitching-Folding Machine, and will automatically trim saddle stitched books up to 3/16 in. max. thickness, at speeds up to 110 books per min. The two-blade shear action utilizing the scissor principle, with the bottom blade remaining stationary, eliminates the use of cutting sticks.

Double conveyor chains carry the saddle stitched books singly into the first cutting station where the front edge is trimmed. At the second cutting station, the books are trimmed at the head and tail and are delivered fanned out on a conveyor belt. An operator at the delivery end of the cutter takes the finished books off the conveyor belt and stacks them on a bindery truck for movement to the shipping department.

Floor space for the Sheridan A-T Single Book Trimmer is 13 ft. by 2½ ft.; weight, 3100 lbs. Max. size book accommodated by the machine is 16 in. by 12 in.; min. size book, 8 in. by 6 in. for the standard model trimmer, 4½ in. by 6¾ in. for the specially designed trimmer in the Feather plant. Rated operating speed is 90 to 110 books per min.

William Feather, jr., explains that the company has found it economical to plant operation to set the machine up for minimum production runs of 2000 books. However, books of the same size, especially the syndicated Feather magazines, are usually scheduled to follow one another to minimize setting the machine up for different size work.

ANPA Biographies

(Continued from Page 53)

as a boy, working in the job shop, galley room, stereotype department and pressroom. He graduated to journeyman stereotyper-pressman on that paper and later served in the same position at the Dubuque (Ia.) *Daily News*. In 1921, he transferred to the Wisconsin *News* in Milwaukee, working respectively as journeyman pressman, color man, man in charge, and assistant foreman. He later served in succession as pressroom foreman of the Milwaukee *Sentinel* and mechanical superintendent of the *Sentinel News*. In addition to his present position at the *Journal*, he has held the posts of color press foreman and pressroom foreman. McMullen modestly admits that he has had a few patents granted on newspaper equipment and a few more pending, but nothing that could be called pioneering.

J. D. RARIDAN is Executive Editor of the Brush-Moore Newspapers, Inc., Canton, O. Much of his time in his nearly half a century experience in the newspaper industry has been spent in close association with composing rooms on makeup and other problems. He notes an increasing awareness in all newspaper offices these days for cooperation between departments. Much has been accomplished, he says, but much more is possible if the men who collectively produce the newspapers understand their individual responsibilities. His present duties combine editorial consultation and interdepartmental coordination in the Brush-Moore newspaper plants. Among the long list of newspapers he has been associated with throughout his career are included the Bloomington (Ill.) *Bulletin*, Peoria (Ill.) *Herald Transcript*, St. Louis (Mo.) *Globe-Democrat*, Peoria (Ill.) *Star*, Cleveland (O.) *Leader*, Cleveland (O.) *Plain Dealer*, Detroit *Free Press*, and the St. Louis *Republic*. He was also with King Features Syndicate, New York, for seven years and has held his present position since 1927.

REG TRANTER, Production Manager of the Boston *Herald-Traveler*, has been associated with that company since 1932. His interests are seated in all phases of mechanical reproduction and in the development of new processes. Along these lines he designed the Blue Streak Edition Marking Machine, Red Head Fudge Printer, portable fountain, and developed a web tip inserting machine and paster. Tranter embarked upon his career in the Graphic Arts with the engineering department of R. Hoe & Co. He later served as engineer on plant layout and assistant mechanical superintendent for the New York *World*. From 1931 to 1932 he worked on press design for the Wood Newspaper Machinery Corp. He is a member of the Joint ANPA-AAAA Committee on Newspaper Printing and the Technical Advisory Board, Graphic Arts Research Foundation, Inc. Tranter was educated in England at Queen Mary's School and Wolverhampton Technical School where he studied mechanical engineering. Woodworking and color photography comprise his hobbies.

Jack Henry Faris, Vice President and Western Manager, Matrix Contrast Corp., was married in Seattle, Wash., on Wednesday, May 23 to Miss Marian Froseth of 4032 50th Ave., South, Seattle 8, Wash.

Baar Injured

Dave Baar, of The Goss Printing Press Co., was seriously injured in an auto accident at Chariton, Ia., May 10. He was en route to Chicago from a field trip. Mr. Baar suffered injuries to both knees, a broken ankle and nose, and cuts about the head. It is not expected that he will be able to resume his duties for several months.

BOOKS

Shop Manual
Typographic Numbering Machines

WILLIAM Herman Lichter thoroughly covers the typographic numbering machine, its defects and reasons for trouble in press numbering work in the 132 page *Shop Manual of*

SINGLE COLOR OFFSET PRESS by I. H. Sayre

Offers detailed technical explanation of the operation and adjustment of the small single color offset printing press. Bound in cloth, 284 pages with 99 illustrations. Price, $6. May be ordered from *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

SALE OF PLANTS • APPRAISALS • SURVEYS
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the Typographic Numbering Machines. The book is divided into three parts as follows: Inward and outward symptons responsible for numbering machine errors; Descriptions of each part of the machine's mechanism, and Answers to typical operating questions.

Mr. Lichter states that 95 per cent of shop errors and paper spoilage can be eliminated in numbering work, if the suggestions and remedies, as stated in his book, were put to use. The manual includes information on how the inward mechanical defects in the machine proper, improper care of the machine, strong type solvents and excessive use of ink can affect proper operation. How hard and soft packings and excessive pressure of quoins against the frame of the machine affect mechanism are also discussed.

A part by part discussion of the dismantled machine is accompanied by illustrations to aid in recognition of the particular part. This section of Lichter's book explains the ways of best detecting mechanical defects in the machine, and presents remedies and care of the machine for the printer.

Ninety-three pages of the manual are devoted to an interesting and informative question-and-answer section on use of typographic numbering machines in daily shop operation. Typical of these are why a plunger cuts through the sheet, why sunken zeros on wheels do not print, using only one regular machine for skip numbering, etc. Answers to over 100 questions are included.

Shop Manual of the Typographic Numbering Machines—by William Herman Lichter. Book consists of 132 pages; size, 5 in. by 7 in.; Kromkote cover printed in two colors with blue metal comb binding. May be ordered through General Numbering Machine Service, 108 N. Jefferson St., Chicago 6, Ill. Price, $3.50 per copy.

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SPEED
and efficiency in your stereo department...
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Elevating and Adjustable-Height Form Tables.
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ENGINEERED FOR
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Blanket Gauge

(Continued from Page 57)

the blanket. The results were plotted graphically and analyzed, and the following conclusions drawn:

1. To measure blanket thickness, a certain amount of pressure must be applied to the blanket surface by the contact points.
2. The applied pressure compresses the blanket so that the thickness reading is always less than the actual blanket thickness.
3. Provided sufficient pressure is applied to iron out minor irregularities and overcome any tendency to curl, readings with $\frac{1}{2}$ in. diam. contact points are more consistent and reproducible than readings with smaller contact points.
4. To obtain consistent readings with the $\frac{1}{2}$ in. contact points the minimum pressure must be at least 5 lbs. per sq. in.
5. The measured thickness of the blankets under tension ranges from 0.0005 to 0.001 in. less than for the same blanket without tension.

What the pressman really would like to know is the true thickness of the blanket when it is under tension on the blanket cylinder. Analysis of the measurements made shows how this true thickness can be found with reasonable accuracy.

In Fig. 1 are shown average compressibility curves for all 13 blankets tested. If the curves *B* and *C* for the smaller contact points (platens) are extended back to the zero pressure line, the points of intersection give approximately true "no-load" thickness values with the blankets under tension. The difference between these points of intersection show the pressures that must be applied when the blankets are not under tension. The difference between these points is only 0.0003 in. which is negligible. Now, if the horizontal lines *T* are drawn to intersect curve *A*, the points of intersection show the pressures that must be applied when the blankets are not under tension to give the same thickness readings. Thus, if a blanket is measured with the proper pressure when it is not under tension, the thickness found will closely approach its true thickness when put under tension on the press cylinder. Taking the average of the two figures we have 9.25 lbs. per sq. in. as the proper pressure.

In view of the unavoidable variations in the thickness of plates and packing, there is a limit to the precision needed in blanket thickness measurement. Those in the best position to judge feel that a precision of 0.001 in. (plus or minus 0.0005 in.) is sufficient. This range is indicated in Fig. 1, and shows that any pressure from 4 to 14 lbs. per sq. in. will

THE STEREOTEX
MATRIX-MOLDING PRESS

and Revolutionary

SPACE-PACKING SYSTEM

● MOLDS and PACKS the mat more perfectly than is possible by roller and hand-packing method.

● Molds the mat to a more uniform thickness—producing a more accurate printing level than is possible by the old method.

● Molds and packs the mat in 30 SECONDS FLAT!

SEE US IN BOOTH 43 CHICAGO

● Eliminates stretch, waves and concaves in the mat and can produce the same shrinkage as is obtained by roller molding.

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Only JUSTRITE* has SAFETY CANS with All These Features!

For FAST, EASY & SAFE HANDLING of all flammable liquids.

Patented "Pouring Lip" reduces spilling. Swinging handle balances load . . . makes pouring easier on 2, 3 and 5 gallon sizes. Trigger handle for one hand operation on 1 Pt. to 1 Gal. sizes. Spring-closing spout cap. Labeled by Underwriters' Labs. and Factory Mutual.

FLEXIBLE HOSE ATTACHMENT
for faster, easier pouring.

Easily attached to any ½ gal. or larger JUSTRITE Safety Can. 9½ inches long, spark proof brass cup and tip. No. 1088, $2.80.

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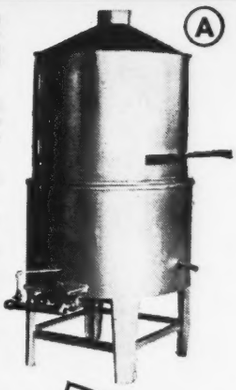
Ⓐ 'Surface' Type Metal Remelting Furnace equipped with Atmospheric Burner and hood. Available in capacities up to 2500 pounds of metal.

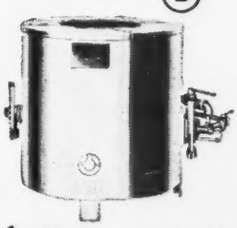
Ⓑ 'Surface' Type Metal Remelting Furnace equipped with Pressure Burner. Available in capacities up to 3200 pounds of metal.

Ⓒ Furnace equipped with atmospheric burner and bottom outlet.

(All types can be equipped with hood)

'Surface' Gas-Fired Furnaces for type metal remelting are designed to provide the industry with an efficient, rapid remelting furnace of long life.





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'Surface' *Standard Rated* FURNACES

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GET YOUR MAILING ROOM IN-LINE

1. Simplify your mailing room planning with in-line production lines.
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yield a thickness reading within 0.0005 in. of the average reading. It was felt, therefore, that the approximate average (9 lbs. per sq. in.) should be chosen as the standard pressure for gauging blanket thickness.

Weight loading of the platen or contact point of the gauge is preferable to spring loading for two reasons: (1) The pressure applied by a weight cannot change, whereas pressure applied by a spring can become weaker with use, and (2) When the pressure is applied by a weight there is no strain on the arbor of the gauge that might throw the reading off. Thus, gauges with very deep throats can be made without loss of accuracy due to lack of rigidity.

In Fig. 2 is shown an example of the blanket thickness gauge. Its throat is about 5½ in. deep and the circular opening is 4 in. diam. This makes it possible to measure the thickness anywhere on a large blanket by rolling the blanket inside the throat. A lever is provided to raise the platen and hold the gauge open. This enables the operator to use both hands to insert the blanket and roll it to the desired position.

The instrument can be obtained from the following distributors:

Fuchs & Lang, Div. of Sun Chemical Corp., 10th St. and 44th Ave., Long Island City, N. Y.

Roberts & Porter, Inc., 541 W. Adams St., Chicago, or 622 Greenwich St., New York, N. Y.

Sinclair & Valentine Co., 611 W. 129th St., New York, N. Y.

International Printing Ink Co., 636 - 11th Ave., New York, N. Y.

Rapid Roller Co., 2558 S. Federal St., Chicago.

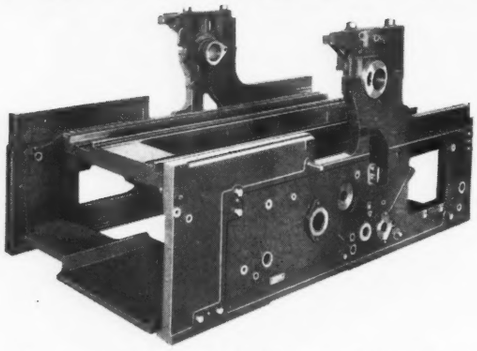
Iowa Conference

(Continued from Page 82)

mat paper only when the delivered pressure force is equal to or greater than the resisting forces set up by the surface area encountered in the molding operations. Goggin also said that since the imprinting capacity of the stereotype mat determines delivered molding pressure required, it may be necessary to avoid any pressure losses to produce uniform penetration of the printing surfaces into the mat—a result which will insure reproducing all printing surfaces at the same level on the face of stereotype plates. In closing his talk, Goggin said that any genuine molding improvement which can be maintained will be governed by taking accurate measurements, periodically and frequently. The depth gauge, straight edge and thickness feeler gauge are essential in locating properly the unfavorable conditions which impose use of molding procedures contrary to good molding results. Unfavorable conditions must first be identified and established before they can be adjusted or eliminated.

(*Continued on next page*)

A GOOD FOUNDATION



The one-piece wayframe with four steel faced tracks cast integrally is a Miller exclusive. On the Miller 27 x 41 SY Single Color, the web-thickness of the side frames is a full 2½", nearly double that of other makes of presses. Write for a descriptive catalog.

MILLER PRINTING MACHINERY CO.

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ALBANY is the Bellwether GREASE

With the great demand for high speed printing, two very important factors stand out today. There must be—

1. Less "Down-time" caused by poor lubrication.
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In other words, today's high speed requirements make the right oils and greases a prime necessity.

For 83 years Albany Grease in various grades, has been the bell-wether grease in the printing trade. Albany oils and pressure greases have been perfected for the most modern presses.

Write us if you're having lubrication problems.

***the* ALBANY Line Greases and Oils**

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DUPLEX OCTUPLE PRESS
4 Units and Double Folder

●

HOE DOUBLE SEXTUPLE PRESS
6 Units and 2 Folders

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GOSS SEXTUPLE PRESS
3 Decks and Double Folder

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DUPLEX 24-PAGE TUBULAR PRESS
3 Decks with ½ and ¼ Folder

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All presses 22¾" cutoff, and have Alternating Current 220 volt 3 phase 60 cycle Full Automatic Variable Speed Motor Drives.

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Speed paper handling with
ECONOMY ELECTRIC LIFTERS

The arms of the Economy Electric Lifter hold the paper at any height with an automatic brake. Paper can be "inched" up with electric power as each lift is transferred to cutting or sorting table. This positive control makes handling of paper easy so that bindery girls can do the work that otherwise would require a man's strength. Being portable, these Economy Electric Lifters can be moved about to serve in any part of the plant.

Economy Lifters are also very useful for handling skids or rolls of paper at loading platforms.

Write for complete specifications of this paper handling lifter. Our engineers can help with your particular problems.

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Composing Room Session

The Composing Room session was under the chairmanship of James F. Cowden, Cedar Rapids *Gazette*. Dr. Robert Hunter Middleton, Director, Dept. of Typeface Design, Ludlow Typograph Co., talked on *Essentials of Type and Typography* and illustrated his talk with slides. Roger L. Perry, Hamilton Mfg. Co., gave an illustrated talk on *Furniture for the Modern Composing Room*. One of the highlights of this session was a Department Store Advertising Designers' Clinic with participants composed of members of various advertising departments of Cedar Rapids stores and an advertising agency.

Weekly Clinic

This new feature of the meeting was divided into two sessions, one devoted to line-casting and the second session to press and stereotype. Harold O. Mohr, president Mohr Lino-Saw Co., presented a sound film in color *A Demonstration of the Mohr Saw*. The meeting then adjourned to the composing room of the Cedar Rapids *Gazette* for a question and answer period in charge of the Co-chairman, Chas. L. Blanchard, Gillespie, Ill., and Bert Du Sold, Mason City.

The press and stereotype session for the weekly group met with Joe Goggin acting as chairman for the meeting. *Handling and Care of Type Metals* was given by Claude Purkis, Vice President, Imperial Type Metal Co. Purkis presented his subject in an interesting manner from the first type faces formed in clay. Then

Acidity Control . . .

Its Importance to Paper and Printing Processes

(By M. S. Kantrowitz, Chairman, Research Committee, Washington (D.C.) Club of Printing House Craftsmen.)

THERE are two methods for determining acidity; one for total acidity expressed in terms of sulfuric acid, the other for the active acidity expressed in terms of pH values. Paper acidity is generally measured in terms of pH rather than total acidity because it is the effective active acid that determines the rate of deterioration, while total acidity is due to organic acids which have practically no detrimental effect on permanence.

An accurate determination of the pH value of paper is most important in the case of rag-book, bond, ledger, and index paper intended for use in permanent records. These papers should be required to have a pH value of not less than 5.0. Rigid requirements for acidity are not necessary if the subject of the printing is regarded as of relatively temporary value, but in the case of important records, their longevity is of paramount importance.

The acidity of printing inks is controlled by standardizing the acidity of the raw materials of which they are composed.

In the manufacture of copper electrotypes, the sulfuric acid content in the acid copper sulfate solution is determined periodically, usually weekly. The sulfuric acid serves to increase anode corrosion, throwing power, and conductivity of this copper plating solution.

In nickel electrotyping, there is an optimum range of pH within which the nickel is deposited smoothly and without tension. Operation of the nickel ammonium sulfate plating bath at pH values outside a range of 6.4 to 6.8, as determined colorimetrically, may result in the nickel splitting or curling up at the edges or in rough deposits.

One of the most important applications of pH control in lithography applies to fountain etch solutions, which are affected by contact with metal, ink, and paper, and by the evaporation of water from the solutions. A pH value of 3.8 for zinc and 4.6 for aluminum plates is recommended by the Lithographic Technical Foundation.

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Your perfect team for producing tough, uniform, scum-free prints in every kind of weather. Keeps all tones tight, re-etches beautifully and holds top. Uniformity, quality guaranteed.

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4 gal. (1 case) $5.00
12 gal. (or more) $4.75

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the early carving of type faces from wood. Following this, molds were made of bronze or iron and molten lead was poured into these forms. He then discussed the content of the metal used today. Purkis also told of the care this metal should receive in order to be in good condition. He was followed by Craig R. Spicher, Director of Printing Education, Miehle Press & Mfg. Co., whose topic was *Typographic Presswork*.

Operation of Our Plant was the subject of the talk given by George Hogan, Plant Supt. of the Stamats Publishing Co., Cedar Rapids. Hogan mentioned that his talk did not have much to do with newspaper work but so many of the smaller weeklies operated job plants he thought he might have something of interest to the group. His talk included every operation of the plant he is associated with from the beginning of a job, taking it through the various phases to completion.

Chairman Joe Goggin discussed *How to Obtain Good Flat Casts*. Goggin said the approach to good flat casting appears to be through an understanding of the causes and corrections of its failures. Seventeen of the most common failures in flat casting include:

1. Cold spots, chilled plates.
2. Buckles, rounded-over printing edges, wrinkled corners, etc.
3. Damaged mats, sticking to face of mats.
4. Sinks, porous casts.
5. Frosty, honeycombed faces.
6. Blisters.
7. Small, irregular shaped holes, increasing under pressure.
8. Uneven surfaces, hills and valleys.
9. Uneven cast thicknesses.
10. Smoky, dirty faces.
11. Warped and distorted plates.
12. Lost detail of printing faces.
13. Damage to printing surfaces after casting.
14. Incomplete cast.
15. Overcast faces.
16. Low centers.
17. Sleepers (backing felt slipped)

Goggin discussed these various points in detail for the benefit of those present.

Iowa Line-casting Association

The Chairman for this group was M. F. Dingman, Cedar Rapids *Gazette*, with Chas. A. Blanchard, Gillespie, Ill., and Bert DuSold, *Globe-Gazette*, Mason City, Ia., as Co-chairmen. E. R. Leach, mid-West Mgr., Mergenthaler Linotype Co., presented slides and descriptions of the new Comet Linotype and new style quadder. Walter F. Severin, mid-West Agency, Intertype Corporation, presented *Matrix Manufacture and Care*. A very interesting open forum technical discussion followed the presentation of the two subjects. At the conclusion officers for the Line-casters were elected with Claude Hamilton, Davenport *Democrat*. President; Don Potter, Davenport

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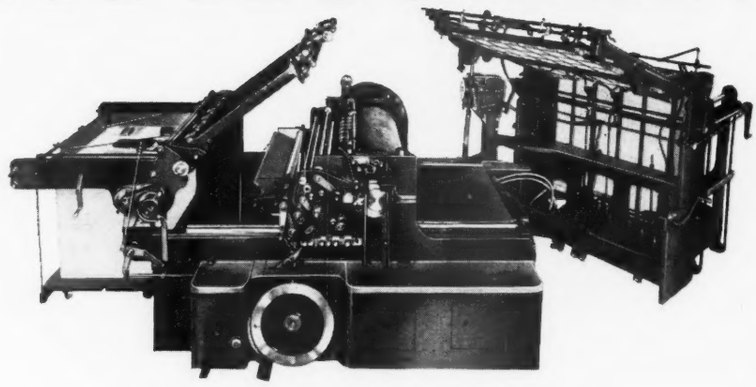

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wanted by nationally known manufacturer to do technical service work. Headquarters in the Midwest. Age 27 to 35. Experience in graphic arts industry—lithography or letter press field, preferably with a technical background. Must be able to pass health examination. In reply give present and past employment and complete history which will be retained confidentially and later returned if desired. If convenient attach recent photograph. Write Box 465.

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Times, Vice President, and Leo N. Rosenberger, Clinton *Herald*, Secretary-Treasurer. Hamilton will also serve as group chairman for next year's meet.

Business Session

The business session was held Monday, May 7 when reports were heard from the various group chairmen of their sessions and programs presented. Election of officers for the Conference resulted as follows: President, Ross DeVine, *Times*, Davenport; First Vice President, Gerald Weis, *Telegraph-Herald*, Dubuque; Second Vice President, Glen L. Meloy, *Register* and *Tribune*, Des Moines; Secretary-Treasurer, Paul F. Kamler, Clinton *Herald*.

Davenport was selected as next year's meeting place, the dates May 17, 18, and 19. The Blackhawk hotel is headquarters for the meeting.

Social Side

The social side of the Conference was not neglected. The annual Fun-Fest was held on Saturday evening in the hotel with Clarence Walkoe, Harry Wilson and Rudy Turnquist as Co-chairmen for the Manufacturers' and Suppliers' Committee.

The annual banquet was held Sunday evening in the Crystal ballroom with Tommy Caldwell acting as master of ceremonies. Some very fine vaudeville was presented. This was followed by a talk given by Don Reid, Managing Director of the Iowa Press Association who asked those present to make every effort to help preserve the freedom of the press.

Gathered for a pleasant chat at the recent Minneapolis (Minn.) Mechanical Conference were (left to right) George Curle, Monomelt inventor, Minneapolis (Minn.) *Star* and *Tribune* machinist and First President of the Northwest Mechanical Conference; Vernon G. Eck, Dunwoody Institute Instructor and President of the 1951 conference; Fred J. Landon, Director of the Dunwoody School of Printing and long a leader in the Minneapolis Club of Printing House Craftsmen, and Al Rosene, St. Paul, Northwest Publications Mechanical Supt., and prominent in Northwest Mechanical Conference affairs.

ADVERTISERS' INDEX • JUNE 1951

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Abrams, The M. L., Co. 106
Allico, Inc. 105
American Publishers Supply, Inc. 99
American Roller Co. 115
American Type Founders 37
Ansco Div., General Aniline & Film Corp. 44
Atlantic Zinc Works 92

Bagley & Sewell Co. 89
Baum, Russell Ernest 93
Bingham's, Sam'l, Son Mfg. Co. 4
Bjorksten Research Laboratories 115
Booth, The E. A., Rubber Co. 114
Burgess Cellulose Co. 30

Capital Tool & Mfg. Co. 91
Certified Dry Mat Corp. 83
Challenge Machinery Co., The 31
Chemco Photoproducts Co., Inc. 38
Cline Electric Mfg. Co. 19
Collmar Corporation 26
Cook's, Adam, Sons, Inc. 112
Cottrell, C. B., & Sons Co. 9
Cromwell Paper Co. 97
Cutler-Hammer, Inc. 24, 25

Dayton Rubber Co., The 12
Dexter Folder Co. 21
Dickerson, Robert W. 115
Dilts Machine Works 101
Dutro, Orville, & Son, Inc. 115

Eastern Newspaper Supply, Inc. 87
Economy Engineering Co. 113
Edes Mfg. Co., The 98
Electric Boat Co., Printing Machinery Div. 94
Elwell-Parker Electric Co., The 20

Fairchild Camera & Instrument Corp. 28
Federated Metals Div. 18

General Electric Co. 10, 11
General Plate Makers Supply Co. 114
Gifford-Wood Co. 99
Goss Printing Press Co., The 34, 35
Greer, Robert Royden 109
Griffiths, John, Co., Inc. 113

Hamilton Mfg. Co. 103
Hammond Machinery Builders, Inc. Inside Back Cover
Harris-Seybold Co. 45
Herrick, William C., Ink Co., Inc. 43
Hoe, R. and Co., Inc. 13, 32
Huber, J. M., Corp. 36

Imperial Type Metal Co. 2, 41
International Printing Ink Div., Interchemical Corp. 40
International Newspaper Supply Corp. 47
Intertype Corporation Outside Back Cover

Jampol Co., The, Inc. 85
Justrite Mfg. Co. 111

Lake Erie Engineering Corp. 39
Lanston Monotype Machine Co. 29
Linotype Parts Co. 23, 95
Ludlow Typograph Co. Inside Front Cover

Macbeth Arc Lamp Co. 107
Matrix Contrast Corp. 48
Mergenthaler Linotype Co. 81
Miller Printing Machinery Co. 104, 112, 114
Monomelt Co., The, Inc. 100
Morrill, Geo. H., Co., Div. Sun Chemical Corp. 7
Morrison Company, The 17

National Lead Co. 89
New England Fibre Blanket Co. 22
New Products Div., Beveridge Paper Co. 27
Nolan Corporation 107

Offen, B., & Co. 115

Paper Manufacturers Co. 108
Pereira, Morton L., & Associates 97
Precision Engraving Co. 96
Printing Equipment Corp. 110
Printing Plate Supply Co. 104

Rapid Roller Co. 33
Rathbun & Bird Co., Inc. 115
Richards, J. A., Co. 91
Rouse, H. B., & Co. 88, 102
Runion, H. Earle 107

Scott, Walter & Co. 6
SKF Industries, Inc. 3
Shulman, Ben, Associates, Inc. 115
Sta-Hi Corp. 1
Standard Process Corp. 97
Star Cement Co. 115
Stereotex Machinery Co. 111
Strong Electric Corp. 46
Surface Combustion Corp. 111

Timken Roller Bearing Co., The 8
Tingue, Brown & Co. 90
Toronto Star, The 111

Vandercook & Sons, Inc. 16
Vulcan Rubber Products, Inc. 42

Wood Flong Corp. 95
Wood Newspaper Machinery Corp. 14, 15

Opens Sales Office

Parsons & Whittemore, Inc., has opened a branch sales office and showroom at 345 Hudson St., New York 14, N. Y. The sales office will be operated as headquarters for national distribution of the Poly 50 Automatic Cylinder Press, according to W. Stockman, in charge of sales. Other members of the sales staff who at present will cover the Metropolitan area of New York include J. Denihan, G. Nettleton, P. Weichselbaum and E. McKeon. Main offices of the company will remain at 10 E. 40th St., New York.

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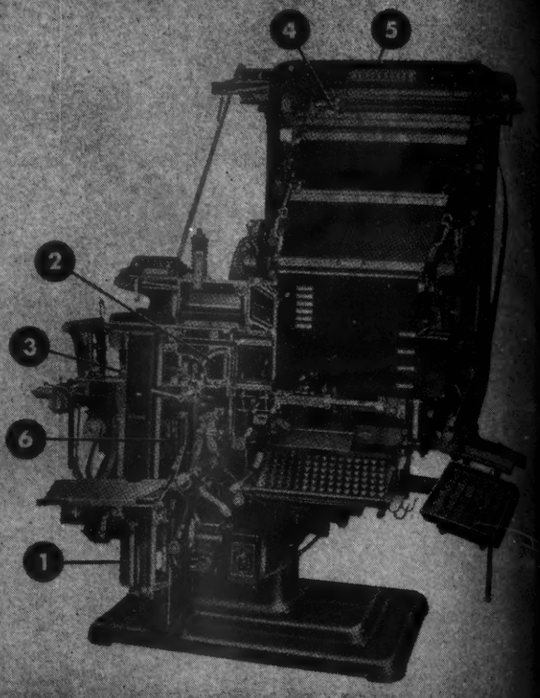

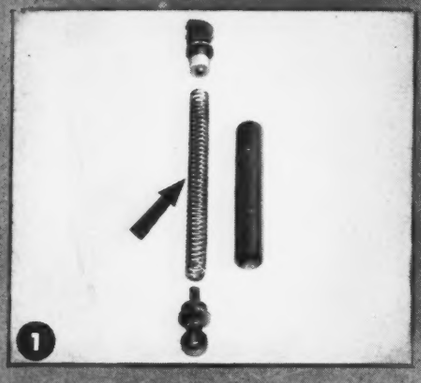

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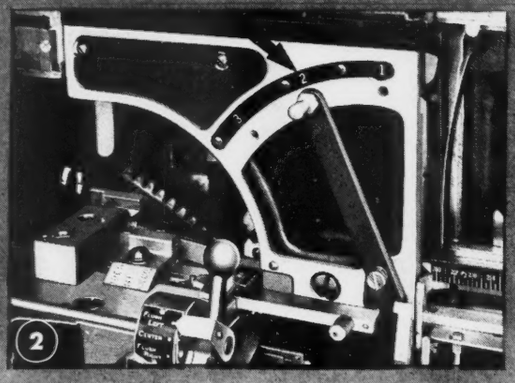
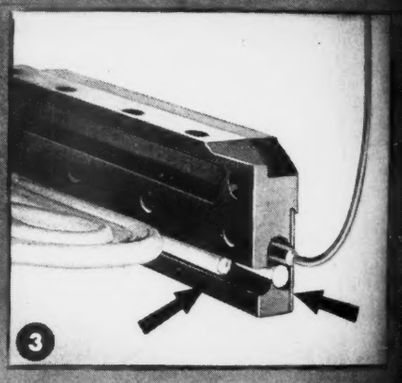
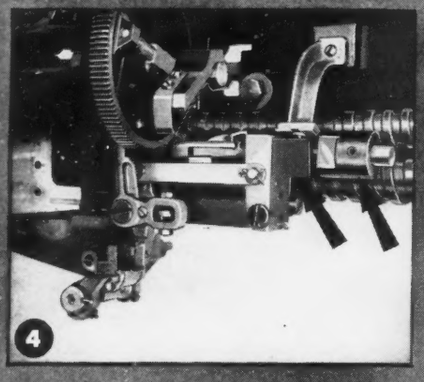


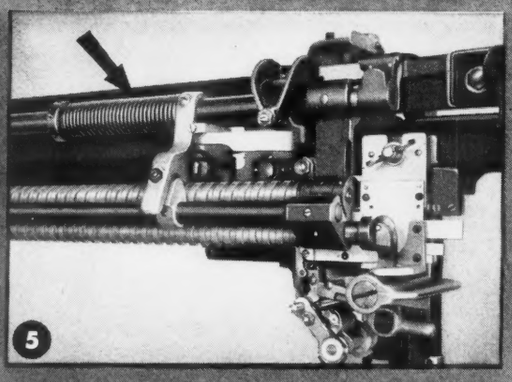
NEW FIRST-ELEVATOR ALIGNMENT LEVER aids operator in setting intricate composition, simplifies and speeds jobs where body sizes and alignment positions change frequently for text, headletter and display.



IMPROVED MOUTHPIECE SHIELD for electric pot prevents metal sprues from sticking to face of shield, assuring good lock-up conditions and reducing maintenance time.



NEW TIMING DEVICE for Mixer distributor accurately regulates time interval between shifting of the distributor box and feeding of matrices to front and back distributor.



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